IDAHO

Nonpoint Source Management Plan

State of Idaho
Division of Environmental Quality
December 1999

TABLE OF CONTENTS

Page

LIST OF TABLES iv

LIST OF FIGURES v

APPENDICES vi

LIST OF ABBREVIATIONS vii

INTRODUCTION 1
- State Overview 1
  - Background - Historica 1
- State Overview 5
  - Background - *Recent* 5
  - Purpose and Objectives 8
- State Overview 9
  - Current 9

CHAPTER 1 - NONPOINT SOURCE PROGRAM GOALS AND OBJECTIVES 11
- General Program Goals 13
- Background Agriculture/Silviculture/Hydrologic & Habitat Modification 16
  - §401 Certification 17
  - Long-Term Goals and Short-Term Objectives for Agriculture, Silviculture, and Hydrologic/Habitat Modification 18
- Background Mining 24
  - Long-Term Goals and Short-Term Objectives for Mining 25
- Background Ground Water 27
  - Subsurface Sewage Disposa 28
  - Industrial Chemicals 29
  - Wellhead Protection 29
  - Source Water Assessmen 29
  - Long-Term Goals and Short-Term Objectives for Ground Water 30
- Background Urban Stormwater Runoff 34
  - Long-Term Goals and Short-Term Objectives for Storm Water 36
- Background Transportation 37
  - Long-Term Goals and Short-Term Objectives for Transportation 38
- NPS Program Goals Summar 39

CHAPTER 2 - NONPOINT SOURCE PARTNERSHIPS 42
- NPS Memorandum of Understanding (MOU) 42

Nonpoint Source Program Consistency 42
Interagency Cooperation 43
Agency Key Roles 44
Idaho Department of Health and Welfare, Division of Environmental Qualit . . 45
Idaho State Department of Agriculture 45
Idaho Department of Fish & Game (IDFG) 46
Idaho Department of Lands (IDL) 47
Soil Conservation Commission (SCC) 47
Soil Conservation Districts (SCDs) 47
Idaho Department of Water Resources (IDWR) 49
Idaho Transportation Department (ITD) 49
Local Highway Technical Assistance Council (LHTAC) 49
University of Idaho - Agricultural Experimental Stations 49
University of Idaho - Cooperative Extension System (CES) 50
Environmental Protection Agency (EPA) 50
USDA-Agricultural Research Service (ARS) 50
USDA-Forest Service (USFS) 50
USDA Natural Resources Conservation Service (NRCS) 50
USDI-Bureau of Indian Affairs (BIA 51
USDI-Bureau of Land Management (BLM) 51
USDI-Bureau of Reclamation (BOR) 51
USDI-Geological Survey (USGS) 51

CHAPTER 3 - ACHIEVING A BALANCED APPROACH FOR CLEAN WATER 52
Water Quality Law and Local Advisory Groups 52
Unified Watershed Assessmen 53
The TMDL Process 54
Annual and Multi-year Workplans 55
Tracking Statewide and Watershed Projects 56

CHAPTER 4 - TAKING PROGRAM PLANNING TO ACTION 58
Idaho's TMDL Implementation Strategy 58
Timeline for Implementation 59
Identification of Participant 59
Discussion of Costs and Funding 60
Maintenance of Effort Over Time 60
Monitoring and Evaluati 60
Public Involvement 61
Addressing Diverse Program Dimensions 61
Coordinating Action 61
Linking Nonpoint Source Pollution Actions 62

CHAPTER 5 - ADDRESSING IMPACTED AND THREATENED WATERS 69
Surface Water 70
Ground Water 75
Source Water Assessment and Protection 78

CHAPTER 6 - NONPOINT SOURCE PROGRAM UPGRADES AND IMPLEMENTATION 81
CWA §319 Requirements 81
BMP Identification and Integration 81
Idaho NPS Rules 82
Feedback Loop 82
State Revolving Fund (SRF) 83
Idaho NPS Related Policies 84
Other Guidance 84

CHAPTER 7 - FEDERAL CONSISTENCY 88

CHAPTER 8 - NONPOINT SOURCE PROGRAM MANAGEMENT 92
Project Timing and Accounting 92
Project Proposals 92
Project Evaluation 95
Project Exemptions 96
Project Subgrants 96
Project Reviews and Reporting 97
Project Monitoring 97

CHAPTER 9 - PROGRAM REVISIONS OR UPDATES 98

CHAPTER 10 - RECOMMENDATIONS AND CONCLUSION 99
Recommendations 99
Conclusions 99

REFERENCES CITED 101

LIST OF TABLES

Page

Table 1.1 Major sources of ground water contamination in Idaho 13
Table 1.2 General Long Term Goals (G) 14
Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS) 18
Table 1.4 Silviculture Long Term Goals (SILL) and Short Term Objectives (SILS) 21
Table 1.5 Hydrologic & Habitat Modification Long Term Goals (HML) and Short Term Objectives (HMS) 22
Table 1.6 Mining Long-Term Goals (ML) and Short Term Objectives (MS) 25
Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS) 31
Table 1.8 Urban Stormwater Runoff Long-Term Goals (USL) and Short Term Objectives (USS) 36
Table 1.9 Transportation Long-Term Goals (TRL) Short Term Objectives (TRS) 38
Table 2.1 Agencies and programs addressing agricultural water quality impacts. 48
Table 3.1 Summary of the numbers of subbasins focused on each year by regional office. 54
Table 5.1 Summary of the 1998 303(d) List [Source: the 1998 305(b) Report]. 72
Table 5.2 Summary of Fully Supporting, Threatened, and Impaired Assessment.* 72
Table 5.3 Summary of pollutants/contaminants on the 1998 303(d) List [Source: the 1998 305(b) Report]. 73
Table 5.4 Major sources of ground water contamination in Idaho [Source: 1998 305(b) report]. 77
Table 5.5 Statewide summary of existing & potential ground water contamination sites [Source: 1998 305(b) report]. 77
Table 5.6 Total number of locations exceeding an MCL for a specific water quality parameter; all subareas combined (1996 & 1997 data). 80
Table 6.1 List and Status of Best Management Practices 86
Table 8.1 Nonpoint Source Projects for 1997 93
Table 8.2 Nonpoint Source Projects for 1998 94
Table 8.3 Nonpoint Source Projects For 1999 95

LIST OF FIGURES

Page

Figure 1.1 1996 §303(d) Surface Water Listing by Parameters. 12
Figure 1.2 Monitoring and Data Analysis for TMDL Decision Making 41
Figure 3.1 Distribution of §319 projects versus funding through 1997. 57
Figure 6.1 The State's feedback loop process. 83
Figure 7.1 Land ownership in Idaho (Source 1992 Natural Resource Inventory Data). 89

APPENDICES

A Nonpoint Source Management Plan Memorandum of Understandings
- A - 1 MOU Implementing the NPS Water Quality Program for Idaho
- A - 2 Forestry Appendix to the NPS Plan
- A - 3 Mining Appendix to the NPS Plan
- A - 4 Agricultural Appendix to the NPS Plan
- A - 5 Draft - Coordinated Resource Management Plan Appendix to the NPS Plan
- A - 6 Dairy Pollution Prevention Initiative MOU
- A - 7 Unified Watershed Assessment Process and Priorities for Idaho

B Idaho Water Quality Law §39-3601 et seq.

C State of Idaho Guidance for Development of Total Maximum Daily Loads

D DRAFT - Overview For The Implementation of Nonpoint Source TMDLs

E Agricultural TMDL Action Plan (May, 1999)

F IDEQ Nonpoint Source Management Program Guidance
- F - 1 NPS Project Technical Evaluation
- F - 2 NPS Program Schedule
- F - 3 NPS Project EPA Required Elements

G Example §319 Comprehensive Implementation Plan - Paradise Creek TMDL Implementation Project

LIST OF ABBREVIATIONS

§	Section
AML	Abandoned Mine Lands
APAP	Agricultural Pollution Abatement Plan
ARS	Agricultural Research Station
ASIWPCA	Association of State and Interstate Water Pollution Control Administrators
BAG	Basin Advisory Group
BIA	Bureau of Indian Affairs, U.S. Department of Interior
BLM	Bureau of Land Management, U.S. Department of Interior
BMP	Best Management Practice
BOR	Bureau of Reclamation, U.S. Department of Interior
CERCL	Comprehensive Environmental Response Compensation and Liability Act synonymous with "Superfund"
CES	Cooperative Extension Service
CWA	Clean Water Ac
COE	Army Corp of Engineers
CRP	Conservation Reserve Program
DOT	Department of Transportation
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide Fungicide Rodenticide Ac
FOTG	Field Office Technical Guide
FWS	Fish and Wildlife Service
FPA	Forest Practices Ac
FY	Fiscal year
GIS	Geographic Information System
GPS	Global Satellite Positioning System
GWMTC	Ground Water Monitoring Technical Committee
HU	Hydrologic Unit Area
IASCD	Idaho Association of Soil Conservation Districts
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Division of Environmental Quality, Dept. of Health & Welfare
IDFG	Department of Fish and Game, State of Idaho
IDL	Department of Lands, State of Idaho
IDWR	Department of Water Resources, State of Idaho
IFOA	Idaho Forest Owners Association
IGS	Idaho Geologic Survey
I&E	Information and Education
ISDA	Idaho State Department of Agriculture
ITD	Idaho Transportation Department

LHTAC	Local Highway Technical Assistance Counc
mg/l	milligrams per liter (synonymous with parts per million (ppm))
MOA	Memorandum of Agreemen
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service, U.S. Department of Agriculture
ORV	Off Road Vehicle
ORW	Outstanding Resource Water
PL	Public Law
PL-566	Public Law 566, Watershed Protection and Flood Prevention
ppm	parts per million (synonymous with milligrams per liter (mg/l))
RBC	Risk-Based Corrective Action
RC&D	Resource Conservation and Development, U.S. Department of Agriculture
RCR	Resource Conservation Recovery Act
RCWP	Rural Clean Water Projec
SAWQP	State Agricultural Water Quality Program
SARA	Superfund Amendments and Reauthorization Act
SCAA	Stream Channel Alteration Ac
SLB	State Land Board
SCC	Soil Conservation Commission, State of Idaho
SCD	Soil Conservation District
SMP	State Pesticide Management Plan
SRF	State Revolving Fund
SRW	Special Resource Waters
TAC	Technical Advisory Committee
TCLP	Toxicity Characteristic Leaching Procedures
TMDL	Total Maximum Daily Load
TSCA	Toxic Substances Control Act
UIC	Underground Injection Control
USDI	U.S. Department of Interior
USFS	U.S. Forest Service, U.S. Department of Interior
USDA	U.S. Department of Agriculture
USGS	U.S. Geologic Survey, U.S. Department of Interior
UWA	Unified Watershed Assessmen
WAG	Watershed Advisory Group
WBAG	Water Body Assessment Guidance
WPCA	Water Pollution Control Account
WRAS	Watershed Restoration Action Strategies

INTRODUCTION

> The significant problems we face cannot be solved at the same leve
> of thinking we were at when we created them.
>
> --Albert Einstein

The following overview of the State processes provides an outline of the historical background and current approaches the State of Idaho has taken to expand and enhance its nonpoint source control efforts with the goal of meeting state water quality standards. The overview focuses on the significant changes that have taken place among all agencies of the State and the processes through which the State presently works to ensure full statewide participation. All agencies are striving to achieve a consistent and uniform approach for water quality management. This effor includes all state and federal partners and the general public within the context of the Tota Maximum Daily Load (TMDL) issue, as well as nonpoint source pollution prevention and control, in general.

If the State of Idaho were to be sectioned according to the major contributors of nonpoint source pollutants affecting both surface water and ground water, the result would partition the State as: 63% of the land ownership in federal lands, 33% private forest and agricultural, with the remaining largely devoted to the urban sector. This shows that by the State having a strong presence through the Nonpoint Source Management Plan in the agricultural partnerships o agencies, producer groups, Soil Conservation Districts, and the public, the State gains significan steps toward addressing the leading contributor to nonpoint point source (NPS) pollution.

State Overview

Background - Historical

Historically, water has been an important issue in Idaho with mining, agriculture and hydropower playing the larger roles in the development and management of the State's water. With abundan water resources, conservation and water quality were at the bottom of the priorities to be addressed. As water resources became over-allocated, and conflicting issues between surface and ground water uses mired decision-making, the State legislature saw a need for a comprehensive water use plan. They created the Water Resource Board in 1965 with the charge "to formulate, adopt and implement a comprehensive state water plan for conservation, development management, and optimum use of all unappropriated water resources and waterways of the state, in the public interest" (Idaho Water Resource Board, 1992). Formulation and adoption of the plan started in 1974 and continued with periodic updating throughout the 80's. Seen as a dynamic process the plan included extensive public involvement through informational meetings and public hearings to ensure public input for all adopted policies and programs; set the roles of the various state agencies; set the stage for a basin approach to addressing the major stream systems; addressed both surface and groundwater conservation and protection; recognized equa consideration for fish, wildlife, and recreation; and otherwise strove to balance water quantity and quality issues in the State.

Comprehensive water planning set new directions for state water agencies. The new direction reached beyond the traditional uses of water and began to look at the associated environmenta benefits and the water quality necessary to achieve those benefits. As the state agencies matured in their roles and federal pressures increased to protect water quality - processes, policies, and tools were developed to address the negative impacts to water quality from both point and NPS pollutants. These sector based tools became more important as the state integrated federal laws and regulations into its processes. Notable among those tools developed in response to Clean Water Act (CWA) §208 to address NPS pollution was the Idaho Agricultural Polluti Abatement Plan (APAP or Ag Plan) (IDHW, 1991). It was developed by the Soil Conservation Commission (SCC) under contract with EPA between 1976-1979. The Ag Plan was first certified in 1979 as the agricultural portion of the Statewide Water Quality Management Plan, with the goal of restoring and maintaining the state's waters impacted by agricultural nonpoint sources to the point of fully supporting identified beneficial uses.

Under the leadership of the SCC, the Ag Plan was designed cooperatively by many local, state and federal agencies, individuals, and organizations. The Ag Plan identified areas where water quality impacts could result from agricultural activities, described the agencies responsible for addressing those water quality impacts, identified Best Management Practices (BMPs) needed to reduce those impacts, and recommended changes needed to reduce agricultural NPS pollution. The Ag Plan was revised in 1983 to address the newly developed State Agricultural Water Quality Program. It was revised again in 1991 to incorporate the many changes in issues and impacts resulting from agricultural uses not adequately addressed previously. At that time the Ag Plan was initiated by adding it as an appendix (A-4) to the Idaho Nonpoint Source Management Plan MOU (Appendix A-1). In addition to irrigated and nonirrigated crop production, the Ag Plan includes livestock grazing/riparian management, non-permitted livestock confinement areas, agri-chemical management, ground water protection and wetlands. The Ag Plan in conjunction wit the *Coordinated Nonpoint Source Monitoring Program For Idaho* (IDHW, 1990) and operating under the auspices of the new roles and direction of Water Quality Law §39-3601 et. seq., remains "the operational guideline" by which the SCC, as the designated agency for private and state agriculture and grazing lands, conducts business with its state and federal partners to address agricultural NPS pollution. As an addendum to the Ag Plan, the MOU (Appendix A-5) adopting the Coordinated Resources Management Planning process (CRMP) was included as the vehicle b which the SCC works with the NRCS, Forest Service (FS) and Bureau of Land Managemen (BLM), as well as other state agencies and producer groups on federal land use issues, relating to crop or livestock production.

Individual agricultural landowners and operators work in cooperation with numerous entities to achieve the goals of the Ag Plan. Chief among those are the 51 Soil Conservation Districts (SCDs) administered statewide by the SCC. In partnership with the SCC and Natural Resource Conservation Service (NRCS), they address the management of all state and private agricultura lands within their boundaries. This partnership is further enhanced by the co-location of the offices of the local SCD, SCC technical representative and NRCS field office. They collectively include any other state or federal land management agency, and local government into resource planning or implementation decisions. SCDs are partially funded by counties and regularly provide input

for planning and zoning or other resource issues to local entities. SCDs are required to develop Five Year Plans for local implementation of statewide priorities. Setting of these priorities were initially an ongoing process which used: information from §208 watershed studies, Clean Lakes studies, Idaho Water Resources basin studies, Basin Area Meetings held across Idaho, priority stream segments as listed in the Ag Plan, and the State's assessment of nonpoint sources as its basis. This represents a vehicle by which long term state priorities are updated and incorporated into local decision-making. With the adoption of Water Quality Law §39-3601 (Appendix B) Basin Area Meetings and Stream Segments of Concern, as listed in the Ag Plan were rescinded to incorporate the Basin and Watershed Advisory Group process and 303(d) priority list.

The State Agricultural Water Quality Program (SAWQP) co-administered by the SCC and IDEQ, was designed and incorporated as the planning and implementation component of the Ag Plan i 1979. The SAWQP was initiated on a watershed scale project basis, with projects selected jointly by the SCC and IDEQ from a competitive priority list made up from proposals submitted b SCDs statewide. It provided funding for watershed scale planning projects, which if selected for implementation included; information and education, administrative, technical assistance, and BMP implementation funding for up to 75% of the installation costs. Within these project areas critical acreage and pollutant sources were identified, and specific BMPs initiated to prevent and control NPS pollution. The planning process required input and participation by all state and federal land agencies having management activities within the project area. BMPs applied were those listed within the Ag Plan, which originated from the NRCS field office technical guide determined to provide the most benefit toward protection and enhancement of surface and ground water quality. Any changes made to the Ag Plan are required to be signed off jointly by bot IDEQ and the SCC.

As the SAWQP program expanded and was revised to meet changing needs, it undertook some steps that produced significant changes in statewide agricultural operations, and in statewide program delivery. Among those changes on farming operations was a focus on adoption of no-till and reservoir tillage technology. The program adopted and promoted use of these practices, even paying for the purchase of no-till drills by SCDs to further encourage adoption. A significant changeover from traditional flood irrigation to sprinkler systems occurred throughout irrigated cropland as the practice was incorporated for cost-share into the Ag Plan. A nutrient managemen standard was adopted and recently updated which should go far toward reducing the impacts fro fertilizers and soil amendments to surface and ground waters. Inclusion of non-traditiona recipients for project benefits, such as canal companies increased the ability of the state to encourage water quality protection, while at the same time increasing the number of partnerships into NPS planning and implementation activities.

Important to comprehensive statewide planning and consistency, the SAWQP was also instrumental in providing interagency state/federal integration of planning through the CRMP process. The CRMP process is enhanced watershed planning and implementation by incorporation of all land users/managers and has included the FS, BLM, BOR, F&WS, NRCS, SCC, IDFG, ISDA, IDL, IDEQ, ICA, and others. The process has resulted in integrated contracts and cos share for cooperator projects (e.g., grazing management, stream renovation, enhancement of fish

and wildlife habitat, wetland restoration and protection). Also tied into this cooperative watershed planning and implementation process were many joint NRCS Farm Bill, PL566, Clean Lakes, and SAWQP projects implemented around the State. NPS Program elements were integrated by the agencies through cooperative MOUs, so the cooperator had just one contract containing only those programs in which they chose to participate.

From initiation of the SAWQP program in 1981 and continuing through the present day, the State has allocated approximately $40 million to providing 34 planning and 48 implementation projects for agricultural NPS prevention and control. This has led to widespread adoption of BMPs statewide that would not otherwise have been implemented. It has funded important loca strategies for specific projects that led to significant reductions in sediments and nutrients entering 303(d) listed stream segments. Additionally, it has initiated collaborative planning efforts from many local, state, and federal entities working together on watershed planning and implementation projects. Much of the technical assistance paid for through SAWQP was provided by MOUs between local SCDs and their NRCS counterparts. These efforts represent approximately 1,200 contracts covering 320,000 acres where BMPs have been applied. This does not account for numerous water quality, wildlife, and fish enhancement projects undertaken by joint efforts (e.g., removal of agricultural drains from streams, providing fish passage through culvert sizing and relocation, fish ladders, fish diversion screens, wetland and habitat development), cooperative projects with SCDs, BOR, ISDA, IDEQ, IF&G, and numerous private entities. Additionally these efforts do not account for the extensive CRMP partnerships covering large areas of federa grazing lands. Associated monitoring with these projects included instream work by IDEQ, and various private contractors, site specific monitoring and BMP effectiveness by ISDA, NRCS, SCC, SCDs and others.

The working relationship involving all land users in local decision-making has made the transition into the changes specified under Water Quality Law §39-3601 an easy transition. The groundwork for the transition had been laid by many years of watershed scale planning through SAWQP projects. The largest change was in refinement of the process to ensure all entities were at the table that were affected by, or had an interest in the process, and secondly to ensure a entities which participated in the process were able to tap into some source of funding to implement planned activities. As the §319 NPS program process became more refined, it became the tool to fill the gap between NRCS Farm Bill programs, CRMP efforts, and the SAWQP program. Projects were funded consisting primarily of urban components, and site specific projects which did not require a full NRCS Resource Management Plan, nor watershed scale planning (e.g., artificial wetlands, riparian fencing, storm water treatment, etc.).

The SAWQP program has been under a new contract moratorium for approximately the last two years, during which the SCC has been formulating a new state funded program to address agricultural NPS prevention and control. The rules for the new program will be submitted to the FY2000 legislature. The new program willl primairly mirror the previous SAWQP effort in that it will be targeted to NPS pollution prevention and control activities for 303(d) listed stream segments. SCC has been additionally working on a proposal to apply for a federal Conservati Reserve Enhancement Program (CREP), which will also be finalized during FY2001. As a result

of these changes in programs, and due to the increased programming requirements to meet the Nine Key Elements for enhanced benefits, the §319 NPS Program has taken on the role as the umbrella program designed on a watershed scale, inclusive of all entities receiving a load allocation from the TMDL, and targeted to implementation of TMDL activities.

State Overview

Background - Recent

Revisions of the Clean Water Act of 1987 established new directions to improve water qualit efforts in the United States. Recognizing the importance of nonpoint source water pollution, the Clean Water Act was amended to include the §319 nonpoint source management program. The IDEQ developed its initial nonpoint source program in 1989 through the coordinated effort o representatives of numerous organizations having an interest in the management of nonpoint source water pollution. Idaho has ambitiously pursued implementation of its program over the past seven years, dedicating personnel and monetary resources to the advancement of nonpoin source water pollution control activities.

In 1995, Idaho undertook a nonpoint source program audit with an eye to recommending changes that would increase the effectiveness of the various ongoing nonpoint source efforts. The audit was one step in the process to determine if nonpoint source management practices were being implemented and maintained on the ground, and if they were being effective in controlling water pollutants. Findings and recommendations from the audit were reported to the management sta of the IDEQ and the resource agencies that had participated in the initial establishment of the nonpoint source program.

The task summary report from the audit revealed that 87% of the tasks originally laid out in the *1989 Idaho Nonpoint Source Management Program* (IDHW, 1990) were accomplished. However, the audit also pointed out that the long term effectiveness in documented water quality improvements was lacking. The major challenges before the program included: (1) a systematic way to assess nonpoint source problems statewide; (2) a clear prioritization process that helps provide solutions to areas of concern; (3) coordination and collaboration among state, federal, and local entities committed to water quality protection and restoration; (4) change from the historical focus at the landscape level into the watershed or drainage basin level; (5) long ter maintenance and upkeep of nonpoint source controls after project monies cease; and (6) documenting lasting water quality improvements in project areas.

It is clear that these challenges are bigger than the nonpoint source program alone. In order to meet the challenges that Idaho water quality programs faced, new partnerships among agencies, tribes, and local stakeholders needed to be forged. Toward this end, in 1995, the Idaho legislature adopted a law (Water Quality Law §39-3601, Appendix B) to provide direction for local watershed planning and management. Under the new law, community-based advisor committees recommend to the IDEQ and other resource agencies how to properly manage the state's watersheds.

Basin Advisory Groups (BAGs) have been established in each of the six river basins around the state. BAG membership:

> Shall be representative of the industry and interests directly affected b implementation of water quality programs within the basin, and either reside within the basin, or represent persons with real property interests within the basin. The shall reflect a balanced representation of interests in the basin and include; representatives of forest products, agriculture, mining, local government, livestock, water based recreation, environmental interests, non-municipal dischargers, tribes, and the general public.

Their responsibility is to make recommendations to IDEQ on water quality issues, including monitoring, revisions to beneficial use status, prioritization of impaired waters, review development and implementation of TMDL processes, and solicitation of public input

The 18 Watershed Advisory Groups (WAGs) recognized to date, are developing watershed management plans (TMDLs) necessary to protect and restore Idaho's water quality. WAG membership is open to all interested parties:

> Shall be representatives from industry and other interests affected by the management of a given watershed, along with representatives of local government and the land managing or regulatory agencies with an interest in the management of that watershed and quality of the water bodies within it

They advise IDEQ on the development and implementation of those actions needed to effectively control pollution sources within a watershed, so that within a reasonable period of tim designated beneficial uses are fully supported. Implementation strategies developed may include educational, voluntary, and regulatory approaches. The proposed strategies include actions required of each agency and affected industry, implementation schedules, estimated costs and budgets, a strategy for coordination, ongoing planning and management, provisions for public involvement, and evaluation of the effectiveness of the actions taken.

Under current operations, as outlined in Water Quality Law §39-3601, SCDs are members of WAGs and have been instrumental in formation of WAGs if none currently exists. WAG technica assistance is provided through cooperative technical committees made up of all agency water quality technicians available to the WAG. Their technical input is used in conjunction with technical assistance provide from other agencies, local interest groups, and the public for planning and priority setting used for the implementation of watershed NPS prevention and control activities. The local input assures all participants - various interest groups, citizens, producers, regulated and nonregulated groups have input into the decision making process. Statewide priorities are provided by the designated agencies to the BAGs and WAGs. SCDs are direct recipients of §319 funding, as well as other federal and state funding for NPS prevention and control, and therefore act as one of the primary implementation entities for TMDL activities.

The WAG and the lead agency forward completed watershed (TMDL) plans to the BAG for review and comment. The final plan is sent to IDEQ for adoption as part of the state's water quality management plan. TMDL implementation plans on a watershed or subwatershed scale are sent by the WAGs to the BAGs, are ranked statewide by the BAG chairmen and IDEQ staff, and are then sent to IDEQ administration with a recommendation for §319 funding. IDEQ adopts and implements the plans according to statewide priorities, and as funding is available.

The local advisory group approach goes a long way towards rectifying the fragmented nature o resource management by achieving a satisfactory level of rational local comprehensive planning and compatible institutional arrangements to facilitate watershed planning and implementation. This arrangement also affords the opportunity for input from various interest groups, including state and federal agencies, and serves as a vehicle for ensuring that these locally developed plans are compatible with the physical environment, reflect social values, and meet the desirable technical goals of sound watershed management. Additionally, IDEQ and other involved agencies benefit through the advice of the BAGs and WAGs, by gaining an incredible amount of input for the enhancement and focusing of all watershed based actions.

As integral components of the BAG/WAG process, technical committees of state and federa agencies play important roles. They help with planning and development of local priorities and direction for water quality protection and restoration based on state and federal guidance, BAG/WAG input, and the State NPS Plan. Examples of these interagency committees for statewide priority setting and inclusion into ongoing processes are the Ground Water Cooperative Agreement Implementation Group, Agricultural Groundwater Coordination Committee, NRCS State Technical Committee, Forest Practices Act Advisory Committee, the State BMP Committee, State Water Quality Committee and the Agricultural TMDL Technical Committee.

Water Quality Law §39-3601 also further defined the roles of the State agencies by assigning designated agencies for those activities within the State that are major contributors of nonpoint source loadings to waterbodies. These are:

> The Department of Lands for timber harvest activities, for oil and gas exploration and development and for mining activities; the Soil Conservation Commission for agriculture and grazing; the Department of Transportation for public road construction; Department of Agriculture for aquaculture, and the Department of Health and Welfare Division of Environmental Quality for all other activities.

The designation of specific agencies gives the State the ability to target projects and programs toward specific activities. By working through the designated agencies the State also gains consistency in adoption and application of prevention and restoration activities statewide. Additionally, it ensures that any given agency has a recognized responsibility for a consistent and uniform approach for dealing with their constituency. Inclusive in the roles for these agencies are other state and federal programs with funding sources, available at their disposal to help ensure meeting the state standards for water quality. These State designated roles are also significant in that the designated agencies automatically partner with those federal agencies having similar

traditional roles, such as the agricultural partnership of the SCC and SCDs with the NRCS. Setting of similar goals, priorities, and program requirements has enhanced the ability of a partners to get the job done, stretched available funding, and ensured state/federal consistency in approaching the challenges posed by nonpoint source pollution and TMDL implementation.

Additional statewide tools provided by the water quality law included continuation of the Beneficial Use Reconnaissance Program (BURP) which conducts beneficial use attainability and status surveys to identify appropriate designated uses, and determine the status of designated beneficial uses in each waterbody. It also provided for ongoing associated monitoring to measure protection and restoration efforts toward achieving and/or maintaining water quality standards. The monitoring by IDEQ has been enhanced by cooperative watershed projects, site-specific projects, and BMP effectiveness monitoring by ISDA, the SCC, and IASCD.

The law also forced an element of statewide coordination and collaboration among state, federal and local entities focusing on TMDL issues and priorities that were not fully achieved in prior planning and restoration efforts. The State stream priority 303(d) list and categorization according to the Idaho Unified Watershed Assessment and Restoration Process (UWA MOU Sep 1998, Appendix A-7) has become the "driver" for watershed based activities. The Idaho Unified Watershed Assessment and Restoration Process has occurred at a time where there has also been a focus on integration of endangered species, Bull Trout restoration planning, groundwater and sole source aquifer protection, urban impacts, point source, and interagency land use issues—into watershed-based implementation activities. Ongoing interagency technical committees work together to forge priorities, develop and merge available tools, and strive to integrate other environmental and natural resource management programs to enhance the environmental benefits achieved statewide.

An example of the technical achievements gained by the state/federal interagency State BMP Technical Committee, which reviews, updates, and adopts BMPs for inclusion into the Ag Plan, would be the new revision of the nutrient management standard (NRCS 590 - July, 1999). The new standard requires use of a nutrient management budgeting approach for application of a fertilizers and soil amendments, if applicable to the farming operation for operators applying for state or federal cost-share funding. It also specifies a minimum amount of soil testing and field level record keeping that will help the State in meeting surface and groundwater nutrien reductions. This will also be important to forging new directions for implementation efforts under the new source water protection planning for municipalities over the next few years. It is also currently a component of the ISDA comprehensive farm planning efforts under the Dairy Initiative (MOU, Appendix A-6), and will be included in the new "Swine and Poultry" Rulemaking currently underway by the State.

Purpose and Objectives

In 1996, the Association of State and Interstate Water Pollution Control Administrators and the Environmental Protection Agency (EPA) restructured the guidelines for state nonpoint source programs. Nine key elements were identified as necessary components for successful programs.

The nine key elements are:

1. Explicit short and long-term goals, objectives and strategies to protect surface and ground water.
2. Strong working partnerships and collaboration with appropriate state, tribal, regional, and local entities, private sector groups, citizens' groups, and federal agencies.
3. A balanced approach that emphasized both statewide nonpoint source programs and on-the-ground management of individual watersheds where waters are impaired or threatened.
4. The State program (a) abates known water quality impairments resulting from nonpoint source pollution, and (b) prevents significant threats to water quality from present and future activities.
5. An identification of waters and watersheds impaired or threatened by nonpoint source pollution and a process to progressively address these waters.
6. The State reviews, upgrades, and implements all program components required by §319 of the Clean Water Act and establishes flexible, targeted, interactive approaches to achieve and maintain beneficial uses of waters as expeditiously as practicable.
7. Identification of Federal lands and objectives which are not managed consistently with State program objectives.
8. Efficient and effective management and implementation of the State's nonpoint source program, including necessary financial management.
9. A feedback loop whereby the State reviews, evaluates, and revises its nonpoint source assessment and its management program at least every five years.

The purpose of the 1999 Idaho Nonpoint Source Management Program is to describe how the State of Idaho intends to meet these nine key elements and the §319 requirements of the Clean Water Act. Chapters 1 through 9 address each of the key elements separately with the final, Chapter 10 outlining specific conclusions and recommendations.

State Overview

Current

Local, regional, and statewide nonpoint source pollution control projects, meeting the criteria se forth in this document, will be eligible for §319 funding. Additionally, Idaho in revising it nonpoint source management program plan is placing a concerted emphasis on the implementation of measures identified in approved TMDL implementation plans and/or Watershed Restoration Action Strategies (WRAS) in accordance with its Unified Watershed Assessment process, as necessary to protect or restore beneficial uses impaired by nonpoin source pollution. With the recent federal protocol for addressing 303(d) listed waters IDEQ w be expanding its efforts for developing collaboration with all its federal partners to ensure listed stream segments meet water quality standards and beneficial uses. Additionally IDEQ has expanded efforts to tie in the urban runoff (stormwater, construction, state and federal roads, etc.) industrial land application, stream alteration (401), and animal feeding operation components int TMDL/WRAS planning and implementation. IDEQ feels that the new Water Quality Law §39-3601 et. seq., and ensuing processes has greatly enhanced Idaho's ability to address the six challenges set forth in the ***Background*** section above. Additionally since passage of Water Quality Law §39-3601 IDEQ has continually worked to broaden and strengthen its nonpoint

source management program through increased partnerships, better public education, and enhanced implementation efforts. These efforts have directed the State of Idaho toward further consistency with the nine key elements of an enhanced program delivery.

This document was sent to each of the designated state agencies, the federal natural resource agencies, the 51 soil and water conservation districts, and several other groups and organizations for review at a number of stages. The final draft is being provided for public comment on the IDEQ website. Newspaper advertising and a concurrent mailing notice through the NPS Progra mail list will provide statewide notice of a 60-day comment period to ensure public comments are incorporated prior to submittal of the final document to EPA. All public comments have been incorporated as appropriate into the final document. A "Responsiveness Document" has been compilied for all general comments. It has been mailed to all entities who submitted comments and is available upon request through IDEQ, c/o Gary Dailey, 1410 North Hilton, Boise, ID 83706.

IDEQ would like to specifically thank the following individuals for providing their insight, guidance, and constructive comments during the development of this document.

Doug Abderhalden	IDEQ	Elbert Moore	EPA	Scott Nichols	IDL
Gary Bahr	ISDA	Charlie Bidondo	IDEQ	Ann Puffer	USFS
June Bergquist	IDEQ	Tony Bennett	SCC	Charlie Rountree	ITD
Biff Burleigh	SCC	Darren Brandt	IDEQ	Ed Tulloch	IDEQ
John Cardwell	IDEQ	Barry Burnell	IDEQ	Gary Daile	IDEQ
Erwin Cowley	BLM	Winston Wiggins	IDL	Jerry West	IDEQ
Karl Gebhardt	BLM	Don Essig	IDEQ	Dean Yashan	IDEQ
Dave Gregor	IDWR	Sally Goodell	IDEQ	Teena Reichgott	EPA
John Heimer	IDFG	Vicki Jewell Guerra	ITD	Craig Shepard	IDEQ
Brian Hoelscher IDEQ		Lynn VanEver	IDEQ	Chris Mebane	IDEQ
Joe King	IDEQ	Roy Jost	ITD	Mike McIntyre	IDEQ
Todd Maguire	IDEQ	Larry Koenig	IDEQ	Jim Wood	NRCS
Byron Keel	LHTAC	Don Martin	EPA	Dave Zimmer	BOR
Ronda Hirnyck	CES				

Boise Cascade Corporation
Payette Soil and Water Conservation District
Southwest Idaho Basin Advisory Group
State of Idaho Mining Advisory Committee

CHAPTER 1 - NONPOINT SOURCE PROGRAM GOALS AND OBJECTIVES

Key element #1 states that *" The State program contains explicit short and long-term goals, objectives, and strategies to protect surface and ground water."*

The vision of the Idaho Nonpoint Source Management Program is that all long-term goals and short-term objectives listed in tables 1.1 through 1.9 be implemented in a manner to protect or restore (where possible) the beneficial uses of the State's surface and ground water. A discussion of Idaho's TMDL and implementation strategy, consistent with the State of Idaho's *Unified Watershed Assessment and Watershed Restoration Action Strategies* (WRAS) (Appendix A-7) is outlined throughout this document. Supplemental guidance from IDEQ which outlines the state of Idaho's TMDL process *Guidance for Development of Total Maximum Daily Loads* (IDEQ 1999a) and *FINAL DRAFT Overview of the Implementation of Nonpoint Source TMDLs* (IDEQ 1999b) are attached in Appendix C and D. The continuing focus for the State of Idaho within the foreseeable future will be to develop and implement TMDLs/WRASs for §303(d) listed water bodies. The state of Idaho has committed to the completion of TMDL implementation plans within an 18 month period following the EPA approval of a TMDL.

The nonpoint source management revision team comprised of state and federal natural resource agency representatives focused on developing action oriented long-term goals and short-term objectives which could be readily included in either nonpoint source management plans or as par of the implementation of TMDLs being developed or scheduled for development by the State of Idaho. A TMDL is a strategy for bringing a water body back into compliance with water quality standards and for improving water quality to the point where designated beneficial uses are full restored. Indicators of success will be the reduction in the numbers of surface water bodies included on the state's §303(d) list throughout Idaho and the reduction in priority ground water sites and areas where nonpoint sources may be threatening ground water quality.

Figure 1.1 outlines the parameters reported to be contributing to the possible impairment o beneficial use(s) and the subsequent surface water listing in the Idaho 1996 §303(d) list. Table 1.1 outlines the major sources of ground water contamination in Idaho as reported in the 1996 §305(b) report and summarized in Chapter 5 of this document.

The State Nonpoint Source Management Program Plan will be used as a significant tool by which the State will achieve restoration, maintenance and protection of the beneficial uses of both surface and ground water bodies. Milestones have been placed on both the long-term goals and short-term objectives which outline the State's implementation strategy for the restoration of beneficial uses impaired due to nonpoint source pollution.

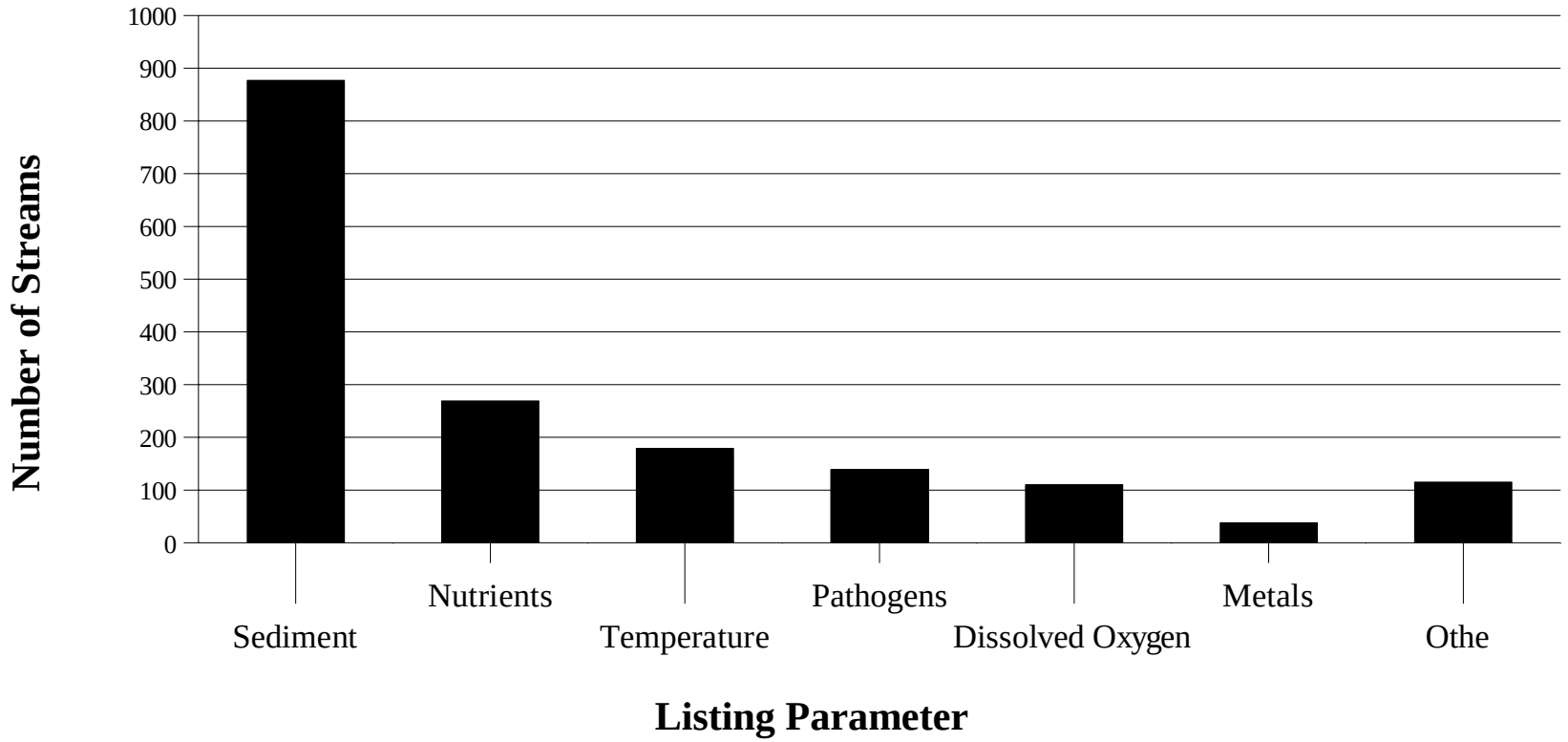

Figure 1.1 1996 §303(d) Surface Water Listing by Parameters.

Table 1.1 Major sources of ground water contamination in Idaho (Source: 1996 §305(b) Report).

• Animal feedlots • Fertilizer applications • Pesticide applications • Shallow injection wells/Urban Runoff • Landfills • Industrial facilities • Storage tanks (underground) • Septic systems • Land application • Waste tailings	• Agricultural chemical facilities • Drainage wells • Storage tanks (above ground) • Surface impoundments • Waste piles • Deep injection wells • Mining and mine drainage • Spills

General Program Goals

These general goals should focus the implementation efforts and measures identified in approved TMDL/WRASs strategies necessary to protect and restore beneficial uses, coupled with additional efforts to prevent significant threats from present and future activities to degrade water quality. It will also target nontraditional partners and incorporate their roles into those planning and implementation activities, such as; Idaho Cattle Association, irrigation and canal districts, etc. (See Introduction, and Agency Roles Chapter 2).

When developing goals for the revised nonpoint source management program plan, the nonpoint source revision committee discovered that many goals were common to each category. These are the long-term goals that each agency is intended to work on based on state, or federal statutes, or local legislation. In order to reduce the redundancy of listing the same goal multiple times, common goals have been included in a general program goals section. Each goal listed in Table 1.2 should be considered applicable to all nonpoint source pollution categories. The implementation of the general program goals and the other category specific goals listed in the remainder of the chapter will ensure that Idaho meets its strategic mission to "preserve the quality of Idaho's air, land, and water for use and enjoyment today and in the future" (IDEQ, 1998c).

Long term goals are designed to be consistent with the time frame of the programs used to achieve the objectives as outlined. Idaho's TMDL development and implementation schedule extends into approximately 2005. All associated efforts will extend through this time frame, with some indicators for improvements in water quality not evident for several more years. This also provides an adequate time frame for all agencies, groups and tribes to integrate protection and restoration activities for surface and ground waters. Therefore, as a minimum, long-term goals outlined in this document are based on a ten to fifteen year time frame. The short-term objectives listed in this plan will be implemented and revised as necessary over the next five years such tha surface and ground water beneficial uses, to the extent practicable, are fully restored or maintained.

Table 1.2 General Long Term Goals (G)									
		Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
G-1	Develop and implement coordinated restoration and water quality improvement plans (TMDL/WRAS/ or other implementation plans) which include appropriate BMP design, implementation, monitoring, and maintenance schedules for nonpoint source impacted surface and ground waters that help to restore, protect, or remediate (where appropriate) existing or designated beneficial uses of the State's surface and ground waters. (#/yr)	**X**		**12**	**13**	**9**	**10**	**9**	DEQ, IDFG, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, EPA, NRCS, SCC, SCDs, USFS
G-2	Implement nonpoint source BMPs to meet approved TMDLs, TMDL implementation plans, and ground water standards.		**X**						IDEQ, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, EPA, NRCS, SCC, SCD's
G-3	Provide technical assistance in the development of surface and ground water BMPs and pollution prevention strategies for nonpoint source categories which are no currently listed as approved in the water quality standards.	**X**							IDEQ, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, NRCS, SCC, SCD's USFS
G-4	Confirm that all agencies are implementing the nonpoint source management feedback loop in a manner consisten with the nonpoint source management program and, where appropriate, are revising and/or maintaining BMP catalogs and effectiveness protocols.	**X**							IDEQ, IDL, IDWR, ISDA, ITD, BLM, BOR, COE, NRCS, SCC, SCD's USFS

Table 1.2 General Long Term Goals (G)									
		Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
G-5	Support ground or surface water monitoring efforts which provide needed data for contaminant transpor modeling and investigation work.	**X**		—	—	—	—	—	IDEQ, IDWR, ISDA, USGS, SCC, SCD, IASCD, ISDA
G-6	Integrate ground and surface water quality concerns within basins and watersheds to provide for better protection and restoration (where appropriate) of ground and surface water beneficial uses.		**X**	—	—	—	—	—	IDEQ, SCC, SCD, IASCD, ISDA
G-7	Develop and implement pollution trading approaches.		**X**	—	—	—	—	—	IDEQ, All other interested agencies, groups, entities
G-8	Implement measures to protect drinking water from the effects of nonpoint source activities.		**X**	—	—	—	—	—	IDEQ, SCC, SCD, IASCD, ISDA
G-9	Update and maintain the NPS umbrella MOU and appendices.		**X**		—	—	—	—	IDEQ, EPA, IDWR, CES, NRCS, FSA, FS, IDFG, BLM, ISDA, SCC, IDL

Background Agriculture/Silviculture/Hydrologic & Habitat Modification
Agriculture, silviculture, hydrologic, and habitat modification for the purposes of the Nonpoint Source Management Program include: the cultivation of cropland; including silvicultura cultivation; raising of livestock; harvesting of forest products; construction of roads on public and private lands; changes to in-channel hydrologic functions; channel and aquatic habitat conditions; and adjacent riparian habitat conditions.

Agriculture and the food processing industry is one of the state's largest industries. Idaho's 22,000 farms and ranches, operating on 13.5 million acres, produced $3.3 billion in cash receipts in 1997 ranking the state 25th in the nation. Idaho has led the country in potato production since 1957, and is also number one in Austrian winter peas, wrinkled seed peas, trout, sweet corn seed, and vegetable seed. Idaho ranks second through fifth in the production of lentils, sugar beets, dry edible peas, barley, alfalfa seed, hops, peppermint, spearmint, prunes and plums, onions, American cheese and spring wheat. Idaho's cattle industry ranks about seventeenth nationally, with cattle feeding operations of 1,000 or more head capacity ranking eighth, and shifting between seventh and eighth for dairy production. Additionally, in 1997 Idaho's farmland provided $95.8 million in property tax revenue. Exported agricultural commodities (1996) were valued at approximatel $901million (Id. Ag. Statistics, 1998).

The forest products industry is also an important segment of the economy in Idaho. Timber is harvested from federal, state, private industrial, and private lands. Forests cover approximately percent of the State's 52.9 million acres. In 1996 the total harvest from these lands was 1.4 billion board feet, while employing approximately 14,450 workers. In 1992 the estimated market value of all lumber and wood related products was approximately $2 billion (Id. Ag. Statistics, 1998).

Many of Idaho's past Nonpoint Source Management Program projects have focused on the repair and recovery of riparian areas due to past and present agricultural (including grazing) and silvicultural practices. Significant strides have been made with both the timber and agricultura industries at identifying many of the less efficient management practices and other activities to reduce the cumulative impacts from these industries.

In Idaho, the primary pollutants of concern from agriculture and silviculture are sediments and nutrients. These nutrients which include phosphorus and nitrates pose a threat to both surface and ground water quality throughout the State. Applications of nitrogen based fertilizers to cropland has led to localized increases in nitrate levels in both surface and ground water. High levels of nitrates (in excess of 10 mg/l) in drinking water supplies also pose a threat to human health and safety in certain portions of the State. Phosphorus can act as a stimulus for the growth of algae and nuisance weeds in lakes and reservoirs. This results in decreased recreationa activities, nutrient over-enrichment, which leads to eutrophication, and may also result in restricting fish populations. Additionally, man's activities can greatly increase the erosion rate above the background level which leads to siltation of stream beds, as well as lakes and reservoirs. Siltation, in turn, can cause the loss of aquatic habitat and beneficial uses in both streams and standing water bodies, and provides much of the mechanism for the movement of nutrients to Idaho's waterways and water bodies.

§401 Certification

All Clean Water Act Section 401 (construction and operations) or 404 (dredge and fill) permits issued by the federal government must meet state water quality standards. All applications are reviewed by IDEQ and a determination is made whether or not the permit will meet the state water quality standards. Application review includes consideration of the potential adverse impacts to designated uses of the waterway, and focuses on possible violations of state water quality standards. Additional information, such as stream mitigation plans, may be requested during the review process and IDEQ may request an extension due to lack of information. After review of the application a written assessment is prepared and IDEQ may certify, waive, or den certification of the project. If the assessment concludes that the project is consistent with the water quality standards, the applicant will receive a certification approval letter. The approva letter will include a statement indicating there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards. The certification letter may include specific conditions under which the proposed activity must be conducted. In cases where there is no discharge to surface waters, a certification waiver is issued. If IDEQ denies certification for a project, a written notice setting forth the reasons for denial will be provided to the applicant. Certification will be denied if the proposed activity will result in a violation of any applicable provision of the Clean Water Act, or the proposed activity prevents or interferes with the attainment or maintenance of applicable water quality standards.

Finally, provisions are outlined within the State's Forest Practice Act, Stream Channel Protection Act, State Agricultural Water Quality Program, Coordinated Resource Management Planning (CRMP), Agricultural Pollution Abatement Plan (AG Plan) and Dairy Initiative which specifically deal with NPS impacts from agricultural, forestry, and hydrologic modification (See Introduction; and Agency Roles in Chapter 2). The long-term goals and short-term objectives for the agriculture (Table 1.3), silviculture (Table 1.4), and hydrologic/habitat modification (Table 1.5) focus on the continued development of watershed restoration plans and the implementation of best management practices to protect, maintain, or restore (where appropriate) beneficial uses impaired due to nonpoint source pollution.

Long-Term Goals and Short-Term Objectives for Agriculture, Silviculture, and Hydrologic/Habitat Modification

Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS)

			Existing	New	1999	2000	2001	2002	2003	Responsible Agency
AL-1	Update the Ag Pollution Abatement Plan, (AG Plan) for consistency with the State's NPS Mgt Program Plan.		X							SCC, IDEQ, Partners, IASCD, NRCS, EPA
	Agencies determine need for revisions			X						
	AG Plan WQ Advisory Committee drafts strateg			X						
	Completed revisions of AG Plan			X						
	AS-1	Review and revise AG Plan and Idaho One Plan BMP component practices.		X						NRCS, SCC, SCDs, ISDA, IDEQ, IDWR, CES, IDL, IDFG, EPA
		Number of components reviewed	X		32	25	25	10	10	
AL-2	Develop and implement a strategy with public land management agencies for consistent implementation of agricultural nonpoint source programs.			X						ISDA, SCC, NRCS, IASCD, IDEQ, IDL, BLM, USFS
	AS-2	Develop state incentive program(s) for installation of agricultural BMPs	X							SCC, ISDA, NRCS, FSA, IDFG
		Idaho Water Quality Program for Agriculture		X						
		Conservation Reserve Enhancement Program		X						
		Idaho Riparian Tax Incentive		X						
AL-3	As ag TMDL/WRAS plans are developed, implement and maintain BMPs on all "critical" ag lands. The Idaho One Plan will be used to assist this process.			X						IASCD, ISDA, NRCS, SCC

Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS)										
			Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
AL-3	Critical Acres (Cumulative Acres Thousands)		**X**		**331.5**	**375**	**440**	**530**	**560**	IASCD, ISDA, NRCS, SCC
	Number of Participant		**X**		**950**	**1250**	**1450**	**1750**	**1850**	
AS-3a		Integrate state and federal programs for BMP implementation (cum. acres treated in thousands)		**X**						IDEQ, IASCD, IDFG, ISDA, IDA, SCC, SCDs, NRCS
		Idaho Water Quality Program for Agriculture	**X**		**275**	**300**	**350**	**425**	**450**	
		CREP		**X**		**2.5**	**2.5**	**2.5**	**2.5**	
		EQIP	**X**		**144**	**150**	**150**	**150**	**150**	
		PL-566	**X**		**7**	**7**	**7**	**7**	**7**	
		WHIP	**X**		**1.7**	**1.8**	**2**	**2**	**2**	
		CRP	**X**		**753.7**	**755**	**755**	**755**	**755**	
		WRP	**X**		**1.87**	**2**	**2.1**	**2.2**	**2.3**	
AS-3b		Identify agricultural nonpoint sources of pollution to §303(d) waters and develop watershed plans for treating critical acres		**X**						
		Plans developed (number)	**X**		**2**	**4**	**5**	**8**	**7**	
		Sole Source Aquifer Plans (number)		**X**	**5**	**5**	**5**	**5**	**5**	
		Develop Nutrient Mgmt Plans for all dairies under the Dairy InitiativeMOU (number)		**X**	**100**	**150**	**200**	**200**	**200**	
		On site dairy inspections (number)		**X**	**980**	**980**	**908**	**980**	**980**	
		Develop Comprehensive Nutrient Management Plans for agricultural operations, as appropriat (number)		**X**	**10**	**20**	**30**	**30**	**30**	

Table 1.3 Agriculture Long Term Goals (AL) and Short Term Objectives (AS)									
		Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
AL-4	Maintain and enhance fish habitat within impacted streams on agricultural lands.		**X**						IASCD, IDFG, ISDA, SCC, SCDs, NRCS, Tribes,
	Number of Projects (Cumulative)	**X**		**45**	**75**	**100**	**135**	**150**	
	Stream Miles (Cumulative)	X		60	70	85	95	120	
	AS-4 Through Lemhi Model and Clearwater Focus Watersheds coordinate local interests, agencies, landowners, and Indian Tribes to maintain and enhance fish habitat and improve water quality.		X						IDFG SCC, SCDs, NRCS, Tribes
	AS-4 Habitat Projects (Number)	X		10	14	16	20	22	
	AS-4 Acres treated (Thousand)	X		3	4	5	6.5	7	
AL-5	Enhance the feedback loop process through design and implementation of BMP effectiveness evaluations and agricultural water quality monitoring.		X						, ISDA, SCC, SCDs, NRCS
	Fate and Transport Studies Developed (Number)	X		12	12	12	12	12	
	BMP Effectiveness Evaluations (Number)	X		20	80	80	100	100	
	AS-5 Establish and coordinate technical assistance from multiple sources to assist agricultural BMP installation and maintenance.		X						ISDA, SCC, SCDs, NRCS
	AS-5 SCC	X		11	12	12	12	12	
	AS-5 SCC/IASCD	X		3	3	5	5	5	
	AS-5 ISDA	X		8	9	9	9	9	
	AS-5 NRCS	X		100	110	120	125	125	

Table 1.4 Silviculture Long Term Goals (SILL) and Short Term Objectives (SILS)

		Existing	New	1999	2000	2001	2002	2003	Responsible Agency
SILL-1	Restore, where appropriate, and maintain beneficia uses damaged by silvicultural activities which cause excess erosion and runoff including the construction and maintenance of forest roads.		**X**						IDL, USFS
SILS-1	Develop a program for removal or rehabilitation of forest roads determined to be contributing nonpoint source pollutants to a watershed, which in turn adversely affects water quality.		**X**						IDL, USFS, BLM
SILL-2	Encourage the review, development, refinement, and implementation of BMPs and encourage the incorporation of new BMPs into the Forest Practices Act Rules.	**X**							IDL, USFS, IDEQ
SILS-2	Continue the use of forestry practices audits to assure compliance with the FPA and State Water Quality Management Plan.	**X**							IDEQ, IDL, IDFG, IFOA, USFS, BLM,
SILL-3	Coordinate watershed management activities in mixed ownership drainages.	**X**							IDL, USFS, SCC, ISDA
SILL-4	Encourage the use of the cumulative effects process to evaluate key forested watersheds. (Approx 80 evaluations on 303(d) watersheds complete) (number)	**X**		5	5	5	5	5	IDL, IDEQ, USFS, BLM

Table 1.5 Hydrologic & Habitat Modification Long Term Goals (HML) and Short Term Objectives (HMS)										
			Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
HML-1	Encourage public/private partnerships for preserving lands set aside for stream buffers/greenways (i.e., comprehensive plans such as the American Farmland Trust) as related to nonpoint source pollution.			**X**						IDFG, IDL, IDWR, ISDA, SCC, SCD's, COE, NRCS
	HMS-1	Investigate the feasibility of developing a riparian/wetland set-aside program		**X**						IDEQ, IDFG, IDL, IDWR, IP&R, SCC, SCDs, BLM, BOR, COE, NRCS, USFS,
HML-2	Encourage the use of bio-remediation techniques and biofiltration systems for erosion control and stream channel stabilization (i.e., willow plantings, root wads for riprap, etc.).			**X**						IDEQ, IDFG, IDWR, ISDA, IDL, ITD, SCC, SCDs, BLM, BOR, COE, NRCS, USFS,
	HMS-2	Control or stabilize channels that ma adversely affect on-site or downstream water quality while encouraging the preservation and integrity of stream channel.		**X**						IDEQ, IDL, BLM, BOR, USFS, IDFG, ISDA, SCC, SCDs, NRCS
HML-3	As appropriate, encourage the fencing of riparian areas to better manage stock access to streams.			**X**						IDL, SCC, BLM, USFS, ISDA, SCDs,

Table 1.5 Hydrologic & Habitat Modification Long Term Goals (HML) and Short Term Objectives (HMS)										
			Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
	HMS-3	Quantify the impacts and effectiveness o biofiltration systems (including constructed wetlands) and infiltration basins on water quality. Follow up with managemen practices to address any potential detrimenta impacts.		**X**						IDEQ, ISDA, SCC, IDFG, NRCS, SCDs
HML-4		Establish protocols to ensure the proper review, implementation, and compliance with the Idaho Stream Channel Protection Act, the Idaho Water Quality Act (§39-3601 et. seq.), the Idaho Water Quality Standards and Wastewater Treatment Requirements, and the Clean Water Act during flood events.		**X**						IDWR, IDEQ,

Background Mining

Mining and the mineral processing industry have continued to be an important segment of the State economy for over 130 years, beginning with the gold discoveries in the Idaho City area in 1862. Other discoveries were made in the Silver City, Elk City, Atlanta, and Coeur d'Alene mining districts, and ended with the Thunder Mountain Gold Rush of 1902. Most of today's hard rock and placer mining continues in many of these same districts, primarily on public lands. Other available economic resources are also mined today and include base and precious metals, phosphates, gemstones, building stone, sand and gravel operations.

The estimated value of the State's raw non-fuel minerals is $400 million with an estimated processed value of over $1 billion. Idaho ranks thirty-second nationally for metallic production, but ranks first in garnet production, third in silver, lead, and phosphorus production, and tenth in gold production (USGS, 1994). Record levels of gold were produced in the State in 1995 with approximately 300,000 troy ounces of gold being produced worth an estimated value of $115 million (USGS, 1995). Idaho is presently only one of a handful of states in the nation to produce antimony and vanadium

Much of today's mining related nonpoint source pollution occurs in historic mining districts where turn of the century, pre-regulatory mining techniques were employed. Although best managemen practices prevent the creation of most nonpoint source pollution at new mine sites, some pollution is still generated. The threat of water pollution exists where: areas are cleared for construction or mining; roads are built for access to the project area; or topsoil stockpiles, ore, and waste rock; and alterations to stream channel are made. Regardless of the source of mining related nonpoin source pollution, the long and short-term mining goals and objectives (Table 1.6) focus on providing tools necessary to support the development and implementation of TMDLs, and the assessment of past program effectiveness.

The Mining Advisory Committee (MAC) consists of representatives from eight federal and stat agencies that regulate mining in Idaho. Although the MAC is not currently funded by the §319 program, it was originally funded by §319 seed money and is still an important mechanism for statewide NPS coordination and for implementing many of the long-term goals and short-term objectives for mining.

Long-Term Goals and Short-Term Objectives for Mining

Table 1.6 Mining Long-Term Goals (ML) and Short Term Objectives (MS)

			Existing	New	1999	2000	2001	2002	2003	Responsible Agency
ML-1	Evaluate and report on the success of the mining nonpoint source program; identify deficiencies and propose remedies to Mining Advisory Committee.			**X**						IDEQ, IDL, IGS, BLM, USFS
	MS-1a	Through university, state, federal, and industry efforts, compile techniques for predicting acid rock drainage (ARD) and/or metal mobilization.		**X**						IDL, IDEQ
	MS-1b	Expand the use of technologies for reducing mine-related nonpoint source water quality impacts.	**X**							IDL
ML-2	Update Best Management Practices handbook for Mining. Amend the handbook to include BMPs for material sources (industrial minerals) operations and the Joint Review Process.		**X**							IDL, IDEQ, IDWR, USFS, BLM
	MS-2	Through the Mining Advisory Committee, conduct BMPs audits to review the administration and implementation of the nonpoint source program along with BMP implementation and effectiveness.	**X**							IDEQ, BLM, IDL, USFS, EPA, IDWR
ML-3	Develop a program and incentives for mine operators to control nonpoint source pollution and where appropriate, restore beneficial uses at historic mine sites.		**X**							IDL, IDEQ, IDWR, USFS, BLM

Table 1.6 Mining Long-Term Goals (ML) and Short Term Objectives (MS)									
		Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
MS-3a	Work with the Abandoned Mine Lands program to identify, prioritize and recla abandoned mine sites throughout Idaho.	**X**							IDEQ, IDL, IDWR, IGS, BLM, USFS
MS-3b	Review and recommend reclamation projects funded through a combination of various funding sources.		**X**		2	2	2	2	IDEQ, IDL, BLM, USFS, Tri-State Partners

Background Ground Wate

Historically, ground water throughout the west has been viewed as an inexhaustible resource: a resource that is inexpensive, readily available, and invulnerable to the detrimental effects o activities occurring on the land surface. This perception has led to the widespread indiscriminate use of this natural resource. With the ever-expanding use of the resource, the need existed to delineate and understand how nonpoint source pollution could affect the State's ground water aquifers.

Idaho's principle aquifers have been mapped by a number of state and federal agencies, and sole source designations have been approved for the Rathdrum Prairie, Lewiston Basin, and the Eastern Snake Plain. Idaho is one of the top five states in the nation for the usage of ground water. Sixty percent of the State's ground water is used by agriculture for crop irrigation; 36 percent is used by industry; and 4 percent is used for domestic drinking water purposes. Idaho's ground water is generally acceptable for drinking water and other designated beneficial uses. However, recent incidents of ground water contamination from such sources as leaking landfills, leaking underground storage tanks, agricultural chemicals, household chemicals, industria chemicals, and failing septic systems have created an awareness of ground water vulnerability. Naturally occurring contaminants such as dissolved solids, fluoride, iron, arsenic, and Radionuclides may also restrict ground water use in certain areas of the State.

Continued incidents of ground water contamination emphasizes the sensitive relationship between ground water quality and all types of land use activities. These incidences of contamination have underscored or accented the understanding that ground water is a limited resource that is relatively easy to contaminate, and once contaminated, very difficult to clean up. Past and presen nationwide efforts have shown that tremendous costs can be incurred when cleaning up ground water contamination. Protection of this resource can be achieved most effectively by preventing contamination.

Prevention efforts through the State have included educating the public and industries on general ground water quality, establishing public participation, providing technical assistance, and mos importantly, developing and implementing measures to prevent ground water contamination.

Concerns over ground water contamination led Idaho policy-makers and citizens to coordinate their efforts to protect ground water. In 1989, the Idaho Legislature enacted the Ground Water Quality Protection Act (Idaho Code Chapter 1 Title 39 Sections 120 through 127). The Ground Water Quality Protection Act created a Ground Water Quality Council which was responsible for creation of the state Ground Water Quality Plan. The Idaho Ground Water Quality Plan was adopted by the Board of Health and Welfare and approved by the Idaho Legislature in 1992. The plan includes six key policy areas and a section on development of a ground water quality monitoring program for the State. As a part of this effort, the Division of Environmental Quality developed the Ground Water Quality Rule in 1996 using a negotiated rule making procedure. The rule established minimum requirements for the protection of ground water through ground water quality standards and an aquifer categorization system. The rule contains numerical and narrative standards which apply to all ground water in the state. The numerical standards, in mos

cases, are based on the maximum contaminant levels established under the Federal Safe Drinking Water Act. The Ground Water Quality Rule was adopted by the Board of Health and Welfare in 1996 and approved by the 1997 Idaho Legislature as IDAPA 16.01.11. The plan, act, and rule provide the underlying guidance for protection of the State's ground water from nonpoint source contamination.

Additionally, the AG Plan and ensuing priorities within other state and federal programs have been modified to provide further guidance and technical support for the protection of the State's ground water resources. The Agricultural Ground Water Quality Protection Program for Idaho (1996) was signed by the Governor in 1995. Other committees that are vital to managing agricultural nonpoint source pollution are the Agricultural Ground Water Coordination Committee (the CAM Process, 1996) and the Ground Water Monitoring Technical Committee.

Subsurface Sewage Disposal

The Board of Health and Welfare developed and revises, as necessary, the *Regulations for Individuals and Subsurface Sewage Disposal Systems* (IDHW, 1997a) to protect the residents o Idaho from nonpoint source pollutants associated with subsurface wastewater (sewage) disposal. Because of the dynamic and complex nature of small wastewater disposal systems governed b these regulations, the need existed for an ongoing technical guidance manual. To fulfill this need, the Board of Health and Welfare established a Technical Guidance Committee comprised of three District Health Department Environmental Health Specialists, a representative of the Division o Environmental Quality, a professional engineer licensed in the State of Idaho, and a licensed septic tank installer. These individuals are responsible for establishing criteria for alternatives to standard drain field systems. A technical guidance manual was prepared by this committee to provide environmental health specialists, professional engineers, installers, and others with information on the detailed design, construction, alteration, repair, operation, and maintenance of standard and alternative subsurface sewage disposal systems.

If individual and subsurface sewage disposal systems are spaced too closely, not maintained, or are in a state of failure, the resultant waste load can cause nonpoint source pollution and public health concerns. The *Technical Guidance Manual for Individual and Subsurface Sewage Disposal Systems* (IDEQ, 1997a) serves as a guiding document for the State of Idaho's Nonpoint Source Management Program plan for all aspects related to individual and subsurface sewage disposal. District Health Departments are responsible for permitting systems covered by individual/subsurface sewage disposal rules. With permitting proposed subsurface sewage disposa systems, the Health Districts perform on-site inspections, determine site suitability, and take appropriate action to enforce the rules. A Memorandum of Understanding between the Health Districts and the IDEQ should be prepared in 2000. The MOU will strengthen the expressed roles and responsibilities, as well as clarify the authority, between the two agencies for enforcing water quality, sewage disposal, public water systems, and solid waste management.

Industrial Chemicals

Statutes and regulations applicable to industry and in particular to industrial chemicals, have been modified and enhanced at both the state and federal levels. By definition, an industrial chemica becomes a hazardous waste when it is no longer suitable as a commercial product, it is either specifically listed as a hazardous waste, or possesses certain characteristics of ignitability, corrosiveness, reactivity, and toxicity. The Resource Conservation and Recovery Act (RCRA) and its promulgated regulations, along with the Idaho Hazardous Waste Management Act, address the generation, storage, treatment, transportation, and disposal of hazardous and solid wastes. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) or as it is more commonly known as "Superfund," provides the means possible to pay for the cleanup of hazardous waste sites when responsible parties cannot be found or are unwilling or unable to pay to clean up the site. It also provides the EPA with the authority to take legal action to force responsible parties to clean up sites or reimburse the federal government for the cost of cleanup.

The Superfund Amendments and Reauthorization Act (SARA) provides the authorities for addressing industrial chemicals that are not waste. SARA Title III requires inventory records be kept. Local emergency preparedness and accident prevention is promoted through loca emergency planning committees. Information is available on chemical storage and is made available to local/regional emergency response personnel. Individual classes of potentially hazardous chemicals such as pesticides, herbicides, fungicides, rodenticides, radioactive substances, and petroleum products are regulated under additional programs.

The extent to which industrial chemicals have impacted ground water quality is limited. Monitoring efforts have primarily focused around leaking underground storage petroleum sites, industrial chemical operations, and military installations. Efforts to date have seen the Idaho Emergency Response Commission, and the six Local Emergency Response Commissions implement the community right-to-know, and the emergency planning requirements as set forth in SARA Title III.

Wellhead Protection

Wellhead Protection is a community-based approach to protect ground water used for drinking water. The 1986 Amendments to the Safe Drinking Water Act mandate that every state develop a wellhead protection program. Idaho is one of 47 states with an EPA approved wellhead protection program. Idaho's voluntary program stresses common sense methods for preventing ground water contamination and is a good companion program to address nonpoint source issues in designated wellhead protection areas.

Source Water Assessment

The Safe Drinking Water Act Amendments of 1996 require states to develop and implement Source Water Assessment Programs (IDEQ, 1999c). Idaho is in the final stages of preparing its source water assessment plan for EPA approval and expects final approval of its source water assessment plan by November 1, 1999. Once approval has been obtained by EPA, the state has approximately 3.5 years to complete the assessments for all public water systems within the state.

A source water assessment includes a source water area delineation, an inventory of significan contamination sources, a determination of risk of public water systems to contamination, and the reporting of the results back to the public water system. Additionally, Idaho will make the final source water assessment report available to the public through its internet site or other public distribution methods.

Long-Term Goals and Short-Term Objectives for Ground Wate

The long and short-term ground water goals and objectives focus on areas of ground water concern and provide technical assistance to cities and counties on all aspects of ground water management within the state of Idaho (Table 1.7).

Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS)										
			Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
GWL-1	Implement the Idaho Ground Water Quality Plan		**X**		—	—	—	—		IDEQ, IDWR, ISDA, Health Districts, SCC
	GWS-1	Develop a ground water appendix to the 1992 Memorandum of Understanding, implementing the Nonpoint Source Water Quality Program.		**X**	—	—				IDEQ
GWL-2	Implement the agricultural BMP feedback loop for priority areas where nonpoint sources are impacting ground water quality.			**X**	—	—	—	—		ISDA, IDEQ, NRCS, SCC
	GWS-2	Develop a process that identifies and prioritizes areas in need of best managemen practice implementation to address nonpoin sources of ground water contamination.		**X**		—	—	—		ISDA, IDEQ, IDWR
GWL-3	Implement Idaho's Ground Water Quality Rul		**X**		—	—	—	—		IDEQ
	GWS-3	Provide technical assistance to ground water users on aquifer categorization, ground water quality standards, and ground water surface water inter-connection.	**X**		—	—	—	—		IDEQ, IDWR
GWL-4	Implement a Regional and Local Monitoring Program that prioritizes and addressees monitoring needs in areas where nonpoint sources are potentially impacting ground water quality.		**X**		—	—	—	—		IDEQ, IDA

Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS)										
			Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
	GWS-4	Routinely (at least once a year) identify and/or update priority sites and areas for regional and local ground water quality monitoring where nonpoint sources may be threatening ground water quality.	**X**							IDEQ, ISDA, GWMTC
GWL-5	Address ground water quality concerns related to the managed recharge of ground water.			**X**						IDWR, IDEQ, ISDA
	GWS-5	Provide technical assistance in the area o BMPs and ground water monitoring of recharge water implementing section 600 o the Water Quality Standards								IDWR, IDEQ, ISDA, SCC
GWL-6	Provide technical assistance to local stakeholders, including local units of government, in identifying, developing, and/or implementing nonpoint source BMPs.		**X**							IDEQ, ISDA, IDWR, Cities, Counties, SCC, NRCS
	GWS-6	Develop BMP implementation plans in at least one large agricultural area every other year to address nonpoint source contamination problems identified through monitoring.		**X**						IDEQ, ISDA, SCC, SCDs, IASCD

Table 1.7 Ground Water Long-Term Goals (GWL) and Short-Term Objectives (GWS)										
			Existing	**New**	**1999**	**2000**	**2001**	**2002**	**2003**	**Responsible Agency**
GWL-7	Develop, modify, and/or maintain state-of-the-art technical guidance manuals to address ground water contamination sources.		**X**							IDEQ, IDWR, ISDA, Health Districts
	GWS-7a	Update the technical guidance manual for subsurface sewage disposal.	**X**							IDEQ, Technical Guidance Committee, Health Districts
	GWS-7b	Develop subsurface drip irrigation and subsurface biofiltration alternative systems for the Subsurface Sewage Disposal Technical Guidance Manual.		**X**						IDEQ, Technical Guidance Committee, Health Districts
GWL-8	Provide technical assistance, as requested from public water systems and/or local units of government to develop voluntar Wellhead/Source Water Protection Plans.		**X**							IDEQ, Idaho Rural Water Association
	GWS-8a	Develop source water assessments for Idaho public drinking water systems as per the Idaho Source Water Assessment Plan. (#/yr)		**X**		**350**	**550**	**1350**	**690**	IDEQ, Public Drinking Water Systems
	GWS-8b	Provide technical assistance in the area of BMP implementation or other measures to address contaminant inventory results for at least four (4) public water systems per year to support the state's wellhead protection or source water protection efforts.		**X**	**4**	**4**	**4**	**4**	**4**	IDEQ, Idaho Rural Water Association, Public Drinking Water Systems

Background Urban Stormwater Runoff

Urbanization is the change in land use from rural characteristics to urban or city-like characteristics. In an undeveloped watershed, runoff is less pronounced and often characterized as sheet flow. The topographic relief of the land's natural surface eventually channels runoff toward draws and valleys forming creeks and intermittent streams that come together to form perennial streams and rivers. In some cases, runoff may be stored in natural dips and depressions of the landscape; in others, runoff may contribute to recharging the ground water table and ultimately contributing to stream baseflows.

In contrast, the land's surface within an urbanizing watershed, typically cleared and graded, is paved and covered b impervious surfaces. Much of the natural retention provided by vegetation and soil is lost. The natural storage capacit of the landscape is smoothed over and covered. Traditional engineering design promotes an effective conveyance network for the removal of rainfall and snow-melt (e.g., curb/gutter). The result of this improved conveyance is a change in the natural local hydrology and morphology. In turn, an improved conveyance network generates greater stormwater runoff volume and increased peak discharges over a shorter time-frame. The impact is an increase in the magnitude and frequency of erosive bankfull flooding due to stream channel widening and incision. This can lead to lower stream baseflows which result from a decrease in ground water recharge. Some characteristic changes in water quality related to runoff from impervious surfaces may be:

- increased sediment and nutrient input;
- increased pathogens; lower concentrations of dissolved oxygen; increased organic matter;
- increased pesticides and fertilizers;
- increased oils, grease, and metals; and increased stream temperatures.

The cumulative effects of urbanization are not only characterized by increasing imperviousness, but increased potential for soil loss from banks within unstable stream channels and contributions of nonpoint source contaminants from poorl contained construction activities throughout the watershed. The process of erosion degrades streams in urbanizing watersheds, as more frequent channel scouring events reflect relatively unstable conditions. Channel instability causes the loss of in-stream habitat structures (i.e., pool and riffle sequences) and reduces wetted perimeters for vegetation. In addition, erosion may provide a greater load of nonpoint source pollutants.

The realm of managing urban stormwater runoff includes existing development, as well as plans for new development. In confronting both the correction of existing and the prevention of future problems, two categories of BMPs are often necessary:

1) watershed planning source control measures—used to minimize and/or prevent the source(s) of urban pollutants; and

2) site design structural measures—designed, constructed, and periodically maintained to interrupt the transport and subsequent discharge of pollutants.

Urban runoff source plans are being developed as part of TMDLs/watershed management plans. These plans identify existing urban stormwater runoff pollutant sources and develop solutions for correcting problems. The second step o TMDLs identifies the priority pollutants and their associated source(s). Pollutants of concern are identified and incorporated together within a source plan. This characterization is used to prioritize pollutant reduction opportunities during the third step to develop the TMDL Implementation Plan. Restoration and other types of retrofit activities should be based on the greatest cost-benefit ratio. Urban runoff implementation plans for new development should emphasize sustaining pre-development runoff volumes through the use of source control BMPs. These plans will vary, but should include design strategies to protect sensitive open space areas, minimize site disturbances, and use the land's natural treatment functions.

Idaho has been actively involved in developing a comprehensive set of technical guidance manuals for implementing BMPs and performance criteria at both the watershed and site development levels. Example publications that are available from IDEQ include *:* 1) *"Environmental Planning Tools and Techniques* (IDHW, 1997a),*"* 2) *"Catalog of Storm Water Best Management Practices for Idaho Cities and Counties* (IDHW, 1997b),*"* and (3)*"Estimating and Mitigating Phosphorus From Residential and Commercial Areas in Northern Idaho* (Panhandle Health District, 1996).

Additionally, the IDEQ in cooperation with the Idaho Transportation Department holds an annual erosion control workshop which is open to the public to highlight new and advanced methods of erosion control.

The long-term goals and short-term objectives for urban stormwater runoff are listed in Table 1.8. The urban stormwater runoff goals and objectives are to identify and mitigate areas contributing to urban runoff nonpoint source pollution. There is a focus in providing greater technical support to communities as they seek assistance for developing local stormwater and drainage master plans, site disturbance ordinances, and amend comprehensive plans and zoning ordinances. These plans are being integrated into the TMDL/WRAS process for watershed planning and are components of the comprehensive implementation activities funded through §319 funds.

Long-Term Goals and Short-Term Objectives for Storm Water

Table 1.8 Urban Stormwater Runoff Long-Term Goals (USL) and Short Term Objectives (USS)

			Existing	New	1999	2000	2001	2002	2003	Responsible Agency
USL-1	Implement Storm Water Program.			X						IDEQ, Health Districts, Cities, Counties
	USS-1a	Acres treated through implemented nonpoint source stormwater/construction runoff demonstration projects.		X	10	20	40	60	80	IDEQ, Health Districts, Cities, Counties, WAGs
	USS-1b	Acres treated through implemented nonpoint source erosion control or construction demonstration projects.	X		5	10	20	30	40	IDEQ, Health Districts, Cities, Counties, WAGs
	USS-1c	Characterize storm water projects using computer models.		X	2	2	4	6	8	IDEQ, ITD, IDL, FS, BOR, BLM
	USS-1d	Incorporate computer model for estimating NPS loads from stormwater runoff and erosion control projects into planning.		X						IDEQ, IDL, ITD, BOR, BLM, FS,
USL-2	Incorporate stormwater BMPs into comprehensive plans and local ordinances.			X						Cities, Counties
	USS-2a	Provide technical assistance to local units of government to develop and adopt urban runoff measures.		X	5	7	10	13	15	IDEQ, Health Districts, Cities, Counties
	USS-2b	Incorporate stormwater BMPs into comprehensive plans and local ordinances.		X	1	1	1	5	10	Cities, Counties
	USS-2c	Recommend minimum statewide guidelines for erosion control near water bodies and other sensitive open-space areas (e.g., wetlands, flood plains, riparian areas, etc.).		X						IDEQ

Background Transportation
Highways, which are defined by Idaho Code as roads, streets, and bridges, are the major mode of transportation in Idaho. Idaho relies heavily on the use of highways to provide essential goods and services. There were approximately 35,000 miles of public highway in Idaho (1997 data, does not include road mileage for state or federal lands). The Idaho Transportation Department (ITD) has 4,953 miles of paved highway and 1,716 bridges. The state highway system accounts for 55% of all vehicle miles traveled. There are 283 local highway jurisdictions in Idaho (cities, counties, and highway districts with jurisdiction over highways). Local Highway Jurisdictions have approximately 30,000 miles o highway (55% unpaved) and 2,352 bridges. These local highway systems accounted for 45% of all vehicle miles traveled.

Many early Idaho highways were built adjacent to or crossing surface waters of the state. Highways can be a primar source of nonpoint source pollution because pollutants derived from highway use, construction, and maintenance wash off roads and roadsides during precipitation or snow and ice melting events. Pollutants commonly associated with roadway runoff include:

- fine-suspended sediment, derived from soil erosion;
- antifreeze, oils and greases, which are leaked or spilled onto roadway surfaces;
- heavy metals, derived from vehicle wear-and-tear;
- fertilizers, and pesticides excessively or improperly used in the green parts of the public right-of-way; and
- road salts.

This polluted runoff or nonpoint source pollution can impair habitat and beneficial uses in the receiving waters. Therefore, highway transportation has been added to the revised "Idaho Nonpoint Source Management Program" plan to assist in raising awareness of highway related nonpoint source pollution.

The jurisdiction for implementation of best management practices in highway construction and maintenance falls to Local Highway Jurisdictions and the ITD. The ITD "*Catalog of Storm Water BMPs for Highway Construction and Maintenance*" (1994) is the preferred statewide technical reference for paved roads. Jurisdiction for implementation o best management practices for roads on public lands falls to the Idaho Department of Lands, U.S. Forest Service, and the Bureau of Land Management. Forest road goals and objectives are found under the silvicultural section of this plan.

Transportation long-term goals and short-term objectives are listed in Table 1.9. The goals and objectives are to implement BMPs on federally aided construction projects and to provide technical assistance on other projects in order to minimize nonpoint source pollution and soil loss due to erosion. IDEQ has a liaison that works closely with the ITD for ensuring they are included into watershed comprehensive planning and that they are partners in TMDL/WRAS activities.

Two sources of additional information for roadway/highway construction and maintenance guidance: (1) Dissmeyer, George, E., 1994, "Evaluating the effectiveness of forestry best management practices in meeting water quality goals or standards," USDA Forest Service, Southern Region, misc. Publication 1520.; (2) MacDonald, Lee, H. and others, 1991, "Monitoring guidelines to evaluate effects of forestry activities on streams in the Pacific Northwest and Alaska," Center for Streamside Studies, University of Washington, EPA 910/9-91-001.

Long-Term Goals and Short-Term Objectives for Transportation

Table 1.9 Transportation Long-Term Goals (TRL) Short Term Objectives (TRS)

			Existing	New	1999	2000	2001	2002	2003	Responsible Agency
TRL-1	Minimize nonpoint source pollution associated with the design, construction, and maintenance of roads.			**X**						ITD, IDL, USFS, LHTAC Counties, Cities, Highwa Districts
	TRS-1a	Review and update (as necessary) the State's BMP manual.	**X**							ITD, LHTAC
	TRS-1b	Provide technical assistance during construction events, as appropriate, in implementing road BMPs.		**X**	**80**	**80**	**80**	**80**	**80**	ITD, USFS, IDL, LTAC Counties, Highway Districts
	TRS-1c	Develop local demonstration projects to illustrate the effectiveness of BMPs at minimizing runoff and erosion associated with construction and maintenance of roads.		**X**	**1**	**1**	**2**	**2**	**2**	ITD, IDL, USFS, Cities, Counties, Highway Districts

NPS Program Goals Summary

The goals in Chapter 1 are expected to remain driving factors throughout the TMDL schedule and ensuing steps o implementation and evaluation. The timing for completing TMDLs is ideally situated around the year 2015. The multiple time lines for long-term 'sector' goals would be based on specific 18-month implementation plan development periods. Additionally, there would be a 2 to 3 year period of actual implementation, followed with approximately 5 years o iterative, BMP effectiveness monitoring for a running total of about 10 years per given TMDL. At the time o completion of the 1998 303(d) list around 2015, the designated water bodies will have been addressed through TMD implementation.

The Idaho NPS Program serves as the umbrella for all nonpoint source related activities. The NPS Program provides a common vision and leadership for coordinating cross-jurisdictionally among the various land management agencies. The long-term goals contained in Chapter 1 are shared among the various land management partners so as to serve as a foundation for program implementation (Table 1.2). Common goals ensure consistency when approaching the many, diverse challenges posed by nonpoint source pollution and TMDL implementation. A shared foundation makes achieving long-term 'sector' goals and the shorter-term objectives feasible. Further, the sector focus encourages designated agencies to partner and anticipate the need to stretch limited funding sources to account for statewide priorities.

Where the lateral interaction of the various land management partners provides consistency, State Water Quality Law §39-3601 provides a vertical linkage to ensure that NPS Program priorities are focused toward impacted and threatened waters. Under State Law §39-3601, community-based advisory committees serve the roles of coordinator and facilitator. They recommend ways to best manage the state's watersheds in accordance with the Clean Water Act. Through a deliberate design, the intersection of community-based advisory committees with that of the diverse interaction among the various local, state, and federal partners not only augments NPS Program activities toward achieving consistency and statewide priorities, but ensures that performance can be tracked and evaluated for definite, multiple time lines.

The goals and objectives found in Tables 1.2 - 1.9 are sector specific as listed. In meeting those priorities, each sector's set of partners should provide the impetus and reinforce the ability for the state to meet its long-term program goals. Additionally beyond the designated key agency roles and elements for reaching statewide consistency outlined in Chapter 2, the NPS MOUs and appendices (Appendix A) outline the specific agreements, objectives and roles for the associated agencies to ensure meeting statewide water quality and antidegradation goals for forestry, mining and agriculture. The TMDL schedule and subsequent implementation ensures that the NPS feedback loop is a driving factor incorporated into the process. The NPS feedback loop in Chapter 6 is especially significant for showing that protective measures are actually being implemented and assess whether changes are necessary as a result of BMP effectiveness monitoring. The ongoing monitoring and analysis of data, as well as statewide Program performance measures will ensure water qualit standards are being reached or maintained through an overall integrated effort.

Meeting short-term objectives and their associated milestones per project, over time should provide the necessary tools to measure performance and gauge process effectiveness. Specific gauges of process effectiveness include:

- Chapter 2: rewriting of all NPS associated MOUs to increase the focus on the Statewide Plan, and provide for an updating of the goals and methods for achieving NPS control for each participant group (completed over the next 2 years); IDEQ will seek to obtain numeric goals and objectives for NPS activities on all State and Federal lands for which designated management agencies are responsible.

- Chapters 3 and 4: meeting the TMDL schedule and actual needs for implementation based on respective TMD Implementation Plans (number of streams taken off 303(d) list each year, implementation plans written and implemented, etc.); and

- Chapters 5 and 6: followup of the implementation measures with monitoring and analysis associated with the feedback loop to ensure all stream segments meet and maintain their beneficial uses (all streams meeting beneficial uses by end date 2015); and

- Chapter 7: identification of impacts and adjustments to management plans in accordance with the April, 1999 *Federal Protocol for Addressing 303(d) Listed Waters* to minimize pollution and protect, and/or restore beneficial uses.

Monitoring and analysis is used throughout the process as laid out in the NPS Plan. It is multifacited and reflects both statewide and regional needs to target efforts and funding to where the most resource benefits can be attained at the least cost. The major identifiable steps (Figure 1.2) for which monitoring and analysis data is collected and directly used in the State decision making process to meet water quality standards includes:

- initial BURP assessment - defines whether or not a given stream segment is meeting beneficial uses, or if more data is required prior to making that determination,

- statewide surface and groundwater monitoring for characterization, evaluation of impacts, and ambient water quality trends,

- determination and updating of water quality standards and beneficial uses,

- compiling 303(d) list and 305b report,

- targeting of sector based project implementation and BMP effectiveness evaluations,

- assurance for protection of human health and biotic integrity.

A flowchart to show how monitoring and data analysis is generally used in the TMDL decision making process would look like the following:

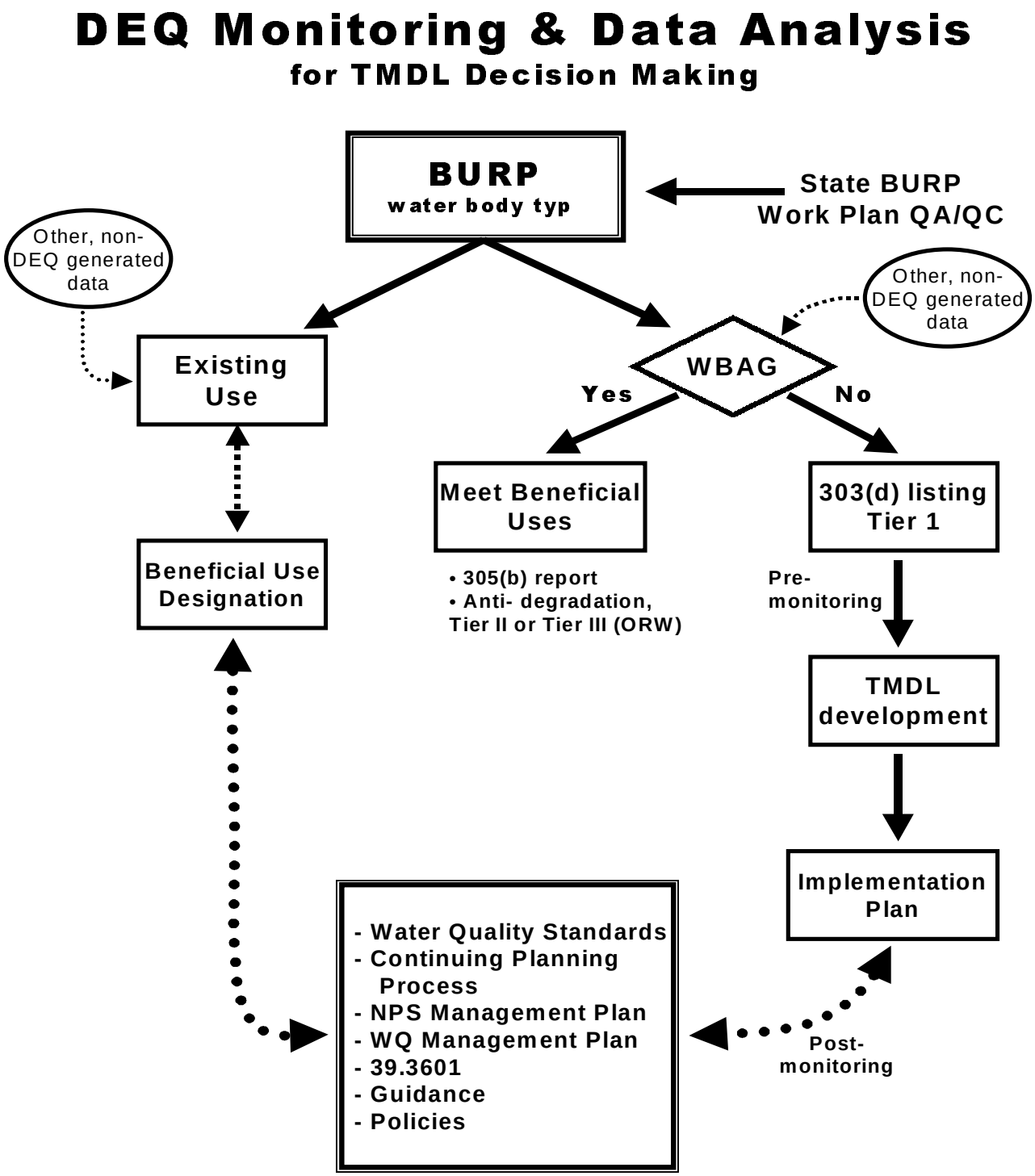

Figure 1.2 Monitoring and Data Analysis for TMDL Decision Making

CHAPTER 2 - NONPOINT SOURCE PARTNERSHIPS

Key element #2 states that a the state will build *"Strong working partnerships and collaboration with appropriate State, tribal, regional, and local entities (including conservation districts), private sector groups, citizens' groups, and Federal agencies."*

NPS Memorandum of Understanding (MOU)

In 1993, IDEQ finalized a MOU which began the implementation of the nonpoint source water quality program in the State of Idaho (Appendix A-1). The parties to this agreement include: Idaho Department of Lands, Idaho Department of Water Resources, Idaho Soil Conservation Commission, Idaho State Department of Agriculture, Cooperative Extension Service, Soil Conservation Service (now the Natural Resources Conservation Service), Agricultural Stabilization and Conservation Service (now the Farm Service Administration), Forest Service (Northern, Intermountain and Pacific Regions), Bureau o Land Management, Environmental Protection Agency, and the Division of Environmental Quality. The MOU outlines the roles and responsibilities of the management agencies in implementing the nonpoint source water quality provisions of the Clean Water Act for the State of Idaho. Key points addressed in this agreement include:

- Coordination of water quality management planning and implementation activities;
- Implementation of the feedback loop concept as described in the Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 16.01.02.350.01.a and 16.01.02.350.02);
- State and federal agency consistency with the Idaho Nonpoint Source Management Program;
- Coordination of monitoring activities; and
- Collection of information on water quality conditions and effectiveness of BMPs biennially to IDEQ for inclusion in the Idaho Water Quality Status Report (§305(b)).

The MOU is updated as necessary to protect Idaho's surface and ground waters from nonpoint source pollution. The IDEQ will work with all of its natural resource agency partners, including EPA, to update the original Nonpoint Source MOU during FY2000, pending final approval of the revised 1999 Idaho Nonpoint Source Management Program Plan. This will include the Silvicultural, Agricultural, and Mining appendices, or the development of new appendices as necessary to ensure capturing those NPS activities and methods by which all land management agencies will participate to ensure meeting State water quality goals. The update will be designed to strengthen its working partnerships and linkages, identify NPS pollution and control activities, and the effectiveness of measures taken to ensure meeting State water quality goals.

Nonpoint Source Program Consistency

Consistency with the Idaho Nonpoint Source Program is provided by:

- As per §39-3601 et. seq., IDEQ lays out the state priorities and processes through the designated agencies: b inclusion of all agency activites through MOUs/MOAs, sharing or combining of funding sources for activities, b ensuring that the agency roles, as outlined below, incorporate the state priorities and processes into their planning and implementation efforts, by integrating those priorities through IDEQ liaisons to multiple State/Federal committees and workgroups, and further by IDEQ Regional Office participation and facilitation of BAGs and WAGs, and other public outreach efforts. This would include the publishing of guidance documents such as the *Guidance for Development of Total Maximum Daily Loads* (IDEQ, 1999a) in Appendix C and its companion, *Final Draft Overview of the Implementation of Nonpoint Source TMDLs* (IDEQ, 1999b) in Appendix D. Additionally, as part of its statewide approach IDEQ works in conjunction with all entities to conduct joint outreach efforts through workshops, meetings, and conferences (such as Water Quality 2000).

- Conducting §319 program and grants training as needed throughout the state to ensure that all programmatic functions are carried out. This training is generally presented to the designated agencies under §39-3601, IDEQ's

partners at soil and water conservation district meetings, BAG meetings, WAG meetings, or upon request by other organizations. In addition, IDEQ has an extensive applicant list it uses to promote the annual §319 nonpoint source management grants program consisting of local governments, cities and counties, Tribal governments, state agencies, soil and water conservation districts, environmental organizations, and various other conservation groups and organizations.

- Utilizing a multi-agency technical advisory committee to develop, refine, and revise the state's Nonpoint Source Management Program Plan as per EPA guidelines (at least once every five years). This committee, (composed o representatives from IDEQ, NRCS, BLM, BOR, USFS, ISDA, IDL, SCC, IDWR, ITD, and EPA) developed, reviewed and refined this document over the course of a two-year period. IDEQ also used the BAGs (developed under Idaho Code §39-3601 et. seq.) to review and provide comments on the draft document. The BAGs are required to be composed of forest products industry, agriculture, mining, local government, livestock, water based recreation interests, non-municipal dischargers, Indian Tribes, conservation interest groups and the public at large. These groups represent a large cross section of the individuals, organizations, and interests affected by the implementation of the state's Nonpoint Source Management Program Plan.

- EPA's role in the State's NPS program is to provide technical assistance and cooperation to help the State with the revision, approval and implementation of the State's NPS Management Program Upgrade that applies the Nine Key Elements. Technical assistance, training, watershed - or community-based projects, cross-boarder, or ecosystem-wide initiatives, and special assistance in working with other Federal agencies, are examples of specific ways in which EPA will collaborate with the State to achieve environmental results. Within resource constraints, EPA will provide more sophisticated assistance such as, advanced modeling and monitoring tools, and design o high-quality watershed projects. EPA will also help arrange for needed technical assistance in monitoring, modeling and best management practices from other Federal agencies, especially the USGS, FS, NRCS, NMFS, BOR, F&WS, and BLM. Where necessary and appropriated EPA will also provide special assistance with Federal agencies where Federal activities may not be consistent with the State's NPS Management Program.

Interagency Cooperation

The IDEQ also provides technical support to a number of interagency groups and organizations to ensure that water quality issues and state priorities are addressed with a watershed focus (TMDLs, §303(d), ORWs, SRWs, etc.), are appropriately addressed within each program, and that programs are coordinated to minimize program overlap or duplication. Examples of interagency cooperation and outreach include:

- The roles of IDEQ and the designated agencies are to work with and advise the BAGs and WAGs. Their operations set the stage for all local watershed and ensuing basin activities. These tie-ins and BAG/WAG roles are further defined in the Introduction and in Chapter 3. Tribal governments have a designated role as participants in both the BAGs and WAGs, have been involved on a regional basis as participants in stream/riparian restoration projects, and work cooperatively with IDEQ and other agencies on integration of water quality monitoring efforts and sharing of information.

- EPA's role in working with Tribal governments and the State on NPS issues will be principally to insure that NPS strategies and efforts are efficient and effective at protecting and restoring beneficial uses of the water resources within each jurisdiction. EPA will work together with the Tribes and the State to build support and cooperation among the citizens, businesses, and governments at the community level for the purposes of formulating effective support for protection, and restoring the ecological health for the on-Reservation waters, and for waters that may be under the jurisdiction of more than one governmental agency.

- Idaho Ground Water Protection Interagency Cooperative Agreement formalized in 1996 between the IDEQ, IDWR, and ISDA. As part of this agreement, the three agencies hold quarterly cooperative agreement meetings (CAMs). These CAMs are used as a forum to coordinate ground water quality related activities statewide, and have been recognized as a tool through which the three state agencies could efficiently coordinate activities necessary to implement the Idaho Ground Water Quality Plan. These efforts mesh with the Agricultural Ground Water Coordination Committee and the GWMTC.

- 404/NEPA Accord commits the FHWA, ITD, FWS, NMFS, COE, EPA, IDEQ, IDFG, and IDL to integrating the NEPA, Section 404, and Section 10 procedures into transportation programming, project development implementation and construction stages of all federal-aid transportation projects in Idaho for which Section 404 permits may be required. This accord ensures the earliest consideration of environmental concerns pertaining to water of the United States, provides for compensation when impacts cannot be avoided, and also provides for an annual meeting and three regional meetings to share information and concerns.

- Development of a partnership utilizing a liaison with the Association of Idaho Cities (AIC) to promote the preservation of natural resources while maintaining a balance for future economic growth. The liaison is responsible for promoting the Small Communities Improvement Program statewide and assisting in coordinating activities between IDEQ, municipalities, and EPA.

- State Technical Committee for agricultural activities covered by the Food Securities Act is composed of individuals from NRCS, SCC, IASCD, BLM, BOR, EPA, COE, NMFS, ISDA, IDFG, IDWR, University of Idaho CES, Idaho Cattle Association, Idaho Dairymen's Association, Idaho Farm Bureau, Idaho Grain Producers, Idaho Pea and Lentil Commission, Potato Growers of Idaho, Idaho Potato Commission, Idaho Wheat Commission, Idaho Wool Growers Association, Certified Crop Advisors, Idaho Rural Development Council, Idaho Pork Producers, and the Idaho Water Users Association. The State Technical Committee is responsible for the establishment of criteria and guidelines for new conservation practices and systems not already described in the NRCS Field Office Technical Guide and is responsible for the development and implementation of the EQIP, WRP, Wetland Conservation, WHIP, CRP, and FIP programs within the state of Idaho. IDEQ and its partnership agencies have used the State Technical Committee as a forum to help set statewide and regional priorities using; §303(d) list, 305(b) report, §314 Clean Lakes Phase I & II reports, ground water aquifers, Endangered Species list and other information. This criteria for selection and ranking of NRCS projects is also used by the various agencies involved in Locally Led Conservation Committees for funding and implementation tie-ins, as well as by other state and federal agricultural programs.

- The IDEQ Storm Water Program is coordinated and integrated with the Idaho Department of Water Resources, District Health, Idaho Department of Transportation, WAG representatives from city/county (planning and public works) staff, highway districts, and state/federal public agencies. The Storm Water Program also provides TMD support, which encompasses coordination among representatives, the facilitation of agendas and some meetings, providing technical/educational assistance in (nonpoint) source plan development, and knowledge transfer from other watershed planning efforts. These activities include highway and construction related runoff control, integration of stormwater control and treatment into site planning, constructed wetland planning and development, phasing out of shallow injection wells as stormwater collectors, etc. This program has set the stage for the funding of many §319 project proposals.

- The Ag Plan is the operations manual by which the designated agencies and their partners cooperate in prioritizing and implementing programs for agricultural NPS protection and control on state and federal lands in Idaho. It is implemented by a MOU (Appendix A-4) under the NPS MOU appendix for agriculture. The 1991 update of the Ag Plan reflects an increased emphasis on livestock grazing, riparian management, CAFOs, agricultural chemical management, ground water protection, and wetland protection/development. The Ag Plan includes: roles and authorities of nonpoint source agencies and other entities; agricultural nonpoint source water quality priorities o the state; a catalog of best management practices; monitoring and evaluation; and a back-up regulatory program. The following agencies have been designated management responsibilities in the Ag Plan: IDEQ as the overall state water quality management agency; the USFS and BLM for the management of federal lands; the SCC for the management of private and state agricultural and grazing lands; IDL for forestry and mining, and the SCDs as the local management agencies for private and state agricultural lands (See Introduction - Historical).

Agency Key Roles

Numerous units of government have the authority and responsibility to control nonpoint source pollution. The following state and federal agencies are recognized as having key designated roles in the implementation of the state's nonpoint

source management program. The Idaho Nonpoint Source Management Program provides the opportunity to develop new and enhance existing cooperative agreements with the state's natural resource partners. These new agreements will provide for increased coordination and cooperation among those partners to ensure better integration of programs, targeting of state priorities, indicators of effectiveness, and measures of success. Implied in this state and federal partnership approach is the need to not only acknowledge and identify local partnerships, but the necessity to facilitate local involvement and opportunities to encourage local leadership in matters of controlling nonpoint source activities.

Idaho Department of Health and Welfare, Division of Environmental Quality (IDEQ
The IDEQ is the designated agency for implementation of the Federal Water Pollution Control Act (33 U.S.C.A. §§1251 to 1387) also known as the Clean Water Act. This responsibility involves the control and abatement of all sources o pollution to both surface and ground waters. The Department's authority for the program is derived from the Environmental Protection and Health Act (Idaho Code, Title 39, Chapter 1). Final authority to approve the State's NPS Management Program remains with EPA Region 10.

The IDEQ's delegated authority for nonpoint source control of surface water pollution includes the following state laws and department rules: the Water Quality Law, Title 39, Chapter 36, Idaho Code and IDAPA 16, Title 1, Chapter 2, Water Quality Standards and Wastewater Treatment Requirements. Idaho Code §39-3601 et. seq. requires IDEQ to: 1) designate the beneficial uses which a water body could reasonably be expected to support; 2) identify reference streams, water bodies or conditions to assist in determining when designated uses are being supported; 3) conduct beneficial use attainability and status surveys to identify appropriate designated uses and to determine the status of designated uses o each water body; 4) prioritize water bodies not supporting their uses in cooperation with the BAGs and other resource agencies and the public; and 5) initiate development and implementation of TMDLs through the use of WAGs, affected resource agencies, and the public. IDEQ has additionally entered into MOUs with IDL, USFS, and the BLM for silvicultural and mining activities, SCC for agriculture and grazing, and ISDA for dairy waste management. IDEQ co-coordinates (with IDFG) the Governor's Bull Trout Conservation Plan. Additionally IDEQ coordinates the implementation of the Ag Plan with the SCC and is a co-signatory for any additions or deletions.

The IDEQ's delegated authority for nonpoint source control of ground water pollution includes the Ground Water Quality Protection Act (Chapter 1, Title 39 Sections 120 through 127, Idaho Code), the Idaho Ground Water Qualit Plan approved by the Idaho Legislature in 1992, and the Ground Water Quality Rule promulgated by the Department and approved by the 1997 Idaho Legislature as IDAPA 16.01.11. The plan, act, and rule provide the underlying guidance for protection of the State's ground water from nonpoint source contamination.

To carry out their many roles IDEQ provides not only technical assistance, but partners with many agencies to ensure the state priorities and processes are implemented. IDEQ works with many technical committees and workgroups to help identify or provide the linkages between setting the statewide priorities, ensuring those priorities are evident in various agency programs, providing the tools, as necessary, to each of the programs to ensure they are carried through to implementation, and ensuring that the various agency efforts are effective in meeting water quality standards and beneficial uses.

In general, nonpoint source activities contributing to water quality standard accedences or beneficial use impairments are not subject to legal actions if BMPs or their equivalents are used. However, injunctive relief can be provided in cases where imminent and substantial danger exists. When beneficial uses are impaired and BMPs have been applied, IDEQ may request modifications of those BMPs until beneficial uses are protected. If BMPs are not modified or recommended measures are not followed, then enforcement actions may be taken. When beneficial uses are impaired and BMPs have not been implemented, or when modified BMPs are not protecting the resource then additional action may ensue including, an enforcement action.

Idaho State Department of Agriculture (ISDA)
The ISDA is the designated agency for aquaculture under Idaho water quality law. Also, ISDA is responsible for regulating the application of pesticides, registration of fertilizers, establishment of safe application requirements for both pesticides and fertilizers, development of the state pesticide management plan, and assisting in the development o agricultural best management practices supporting the Ag Plan. Authority for ISDA's role comes from Idaho Pesticide Law (Title 22, Chapter 34, Idaho Code), the Fertilizer Law (Title 22, Chapter 6, Idaho Code), and for the control o

dairy waste in agriculture from the Idaho Dairy Industry regulation (Title 37, Chapters 3, 4, 5 and 7, Idaho Code). The ISDA also has a cooperative enforcement agreement with the EPA to enforce the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C.A. §§1701 to 1784) also known as FIFRA. ISDA is the lead in creating and implementing the Idaho Pesticide Management Plan (PMP).

The ISDA chairs the Agricultural Coordination Committee, which facilitates implementation of the Agricultural Ground Water Quality Protection Program. The coordination committee meets quarterly, and includes state, federal, local, and private sector groups. ISDA is a member of the Ground Water Monitoring Technical Committee that participates in identifying and addressing agricultural water quality impacts through monitoring, and making recommendations for needed protection or remediation to the designated agencies, or WAG as appropriate. ISDA is also implementing an agricultural TMDL water quality monitoring program jointly with the SCC, SCDs, and IASCD (see Agricultural TMD Action Plan Appendix E, Obj. #6). Additionally, they are implementing an agricultural ground water quality regional and local monitoring program related to pesticides and nutrients.

The ISDA is also a major player in working with the SCC as the designated agency for agriculture and grazing to carr out project specific implementation monitoring, and BMP effectiveness monitoring. They work closely with IDEQ, IDWR, USGS and on technical committees of the BAGs/WAGs, and participate on the Ground Water Ambient Monitoring and Surface Water Monitoring Networks to identify problem areas and monitor the effectiveness o implementation actions taken. They also chair the Coordinated Resource Management Planning (CRMP) committee, which plays a large interagency role in planning and implementation related to state and federal grazing lands (See Introduction - Historical, MOU Appendix A-5). As stated above the ISDA has the lead role in regulation of the dair industry in Idaho. In implementing the dairy program, ISDA monitors ground water under these facilities. Through a MOU (Appendix A-6) between IDEQ, EPA, ISDA, and the Idaho Dairy Association (IDA) the ISDA ensures dair waste systems and practices are in accordance with the provisions outlined in the *Idaho Waste Management Guidelines for Confined Feeding Operations* (IDEQ, 1993 - updated 1997). This MOU lays out the working arrangement between the agencies to reduce duplicative inspection efforts, increase the frequency of inspections of waste management systems, and provide a sound inspection program to prevent and protect pollution of surface and groundwater. This effort has proven to be successful as dairy compliance is tied to milk sales.

Additionally the ISDA has been a lead agency among the agencies and agricultural interests led by IDEQ, SCC, NRCS, and EPA in the development, promotion, and conduction of field trials for use of the Idaho One Plan. This computer-based program is an interagency effort through an MOU to improve efficiency and effectiveness to the agricultural community by integrating agency programs into a single plan which is user friendly and user driven. The ISDA is also a lead player along with IDEQ, SCC and IASCD for the integration of the Idaho Farm/Home*A*Syst efforts into program and project work. An example of this is the tie-in of farm site evaluations for well head protection using Farm/Home*A*Syst materials, by cooperators attending required annual pesticide training workshops. Many agencies are involved to various degrees in the management of agricultural nonpoint source issues. Table 2.1 outlines the agencies and programs that participate in addressing agricultural water quality impacts.

Idaho Department of Fish & Game (IDFG)

The IDFG is the executive arm of the Fish and Game Commission and is the designated wildlife management agency for the State as outlined in Title 36, Chapter 1, Idaho Code. The IDFG provides the BAGs with information regarding the presence or absence of aquatic species listed as "threatened," "endangered," or "candidate" pursuant to the Federal Endangered Species Act. The IDFG also co-coordinates with IDEQ the Governor's Bull Trout Conservation Plan.

The IDFG also works with their federal partners to ensure consistency in habitat and fish restoration activities statewide. Additionally they are partners in most implementation efforts dealing with riparian/habitat restoration and protection providing both technical assistance and funding as necessary. They work in partnership with the SCC and NRCS to integrate technical assistance and programs to ensure full resource coverage to help all agricultural lands meet state water quality standards and beneficial uses. Additionally, they work in the WAG process to provide technical and financial assistance for threatened and endangered species, and riparian enhancement activities.

Idaho Department of Lands (IDL)
The IDL is responsible for managing public trust lands; administering forestry and mining best management practices on private and state lands; consulting and cooperating with federal land managers; and oversees timber harvest activities, oil and gas exploration and development, and mining activities in Idaho. The IDL has authority to administer the Idaho Forest Practices Act (FPA) (Title 38, Chapter 1, Idaho Code), the Dredge and Placer Mining Protection Act and the Idaho Surface Mining Act (Title 47, Chapters 13 and 15, Idaho Code), and the Idaho Lake Protection Act (Title 58, Chapter 13, Idaho Code). Under the Antidegradation Policy, IDL is designated as the lead agency for surface mining, dredge and placer mining, and forest practices on all lands within the state (Executive order 88-23). IDL works closel with IDEQ in conduction of the FPA audits which form the basis for achieving State/Federal consistency for NPS activities on forest lands (MOU, Appendix A-2). They also work extensively with IDEQ, BLM and FS on the use of the Forest Practices Cumulative Watershed Effect Process (CWE) for watershed evaluation input to the TMDL process. ID has entered into a MOU (Appendix A-3) with IDEQ, USFS, and the BLM to coordinate the administration of their respective laws and regulations pertaining to mining operations on National Forest and BLM lands.

The Forest Practices CWE Process provides a direct linkage for developing TMDLs and implementation plans for the forested portions of watersheds on the State 303(d) list. To date, IDL, in partnership with the IDEQ has conducted CWE evaluations on approximately eighty 303(d) listed stream segments. IDEQ does intend to use CWE data in developing TMDLs for forested watersheds. In turn, IDL will use this data to identify problem areas within a watershed and develop site specific BMPs for given TMDL implementation plans. Therefore, CWE is considered integral to both development and implementation of TMDLs.

Soil Conservation Commission (SCC)
SCC offers assistance to the supervisors of the 51 Soil Conservation Districts (SCDS) as organized in Soil Conservation District Law (Title 22, Chapter 27, Idaho Code). The SCC is the designated agency for grazing and agricultural activities under Idaho law. As the lead agency for agriculture the SCC has guided the many entities affected by TMD issues to cooperate and coordinate efforts. They provide ongoing interagency education and training to promote integrated planning to address issues leading to effective watershed implementation strategies. They are a significant partner in the BAG/WAG process in furthering the state efforts through their SCC, SCD, and NRCS partnership.

Additionally the SCC has formulated an Agricultural TMDL Action Plan (Appendix E) to develop and implement agricultural portions of TMDL watershed plans. They also formed a parallel interagency coordination and planing committee made up of SCC, NRCS, IASCD, IDL, IDWR, ISDA, IDEQ, EPA, CES, and others. The committee focus is to provide and share information, educate various entities and the public, and ensure program integration for planning and implementation of all watershed activities. The SCC also chairs the State BMP committee which evaluates and adopts all new BMPs into the Ag Plan (see Introduction-Historical).

Soil Conservation Districts (SCDs)
The purpose, organization, and authority of Soil Conservation Districts is vested in Soil Conservation District Law (Title 22, Chapter 27, Idaho Code). The law acknowledges that improper land use practices cause and contribute to soil erosion from farm, ranch, range, and forest lands in Idaho. Fifty-one SCDs cover the 44 counties in Idaho. In some instances, more than one county is included in a SCD while other counties have more than one SCD. The Soil Conservation District Law provides the SCDs with broad-based natural resource responsibilities.

Table 2.1 Agencies and programs addressing agricultural water quality impacts.

AGENCIES AND PROGRAMS	Function	Regulatory	Land Management	Service Oriented	Research Oriented	Programs	Grazing & Range Mgmt.	Water Resource Management	Soil and Water Conservation	Water Supply	Water Pollution Abatement	Specific Roles	Advisory	Planning	Technical Assistance	Financing	Monitoring	Regulatory Enforcement	Permit and License Review
FEDERAL																			
Environmental Protection Agenc		x		x	x						x		x	x	x	x	x	x	x
Bureau of Land Management			x				x	x	x		x			x	x		x	x	
USDA - Forest Service			x				x	x	x		x			x	x		x	x	
Bureau of Indian Affairs			x				x	x	x		x			x	x				
US - Fish and Wildlife Service			x								x		x				x		x
Bureau of Reclamation				x				x	x	x	x			x	x		x		
Natural resource Conservation Service				x			x	x	x	x	x		x	x	x	x			
Farm Services Administration				x					x		x		x			x			
US - Geological Service				x							x		x				x		
National Weather Service				x				x		x	x		x						
Army Corps of Engineers				x						x	x						x		x
Farmers Home Administration				x					x		x					x			
Small Business Administration				x					x		x					x			
Science and Education Administration - Ag Research					x		x	x	x		x		x						
Intermountain Forest and Range Experiment Station					x		x	x	x		x		x						
STATE																			
IDH&W - Divsion of Environmental Qualit		x		x							x		x	x	x	x	x	x	x
Department of Agriculture		x		x			x				x		x	x	x		x	x	x
Department of Water Resources		x		x				x		x	x		x	x			x	x	x
Department of Lands			x	x			x		x		x			x	x		x	x	
Department of Fish & Game			x	x				x			x		x	x	x		x		x
Soil Conservation Commission				x			x		x		x		x	x	x	x			
Cooperative Extension Services - Univ. of Idaho				x				x	x		x		x		x				
Agricultural Experiment Stations - Univ. of Idaho				x				x	x		x		x						
Idaho Water Resources Research Institute - Univ. of Idaho				x				x	x		x		x						
COUNTY AND LOCAL																			
County Commissions		x									x		x						
Soil Conservation Districts				x			x	x	x		x		x	x	x				
Watershed Improvement Districts				x			x	x	x	x	x		x	x	x				
Irrigation, Drainage and Flood Districts				x				x	x		x		x	x	x				
Basin Advisory Groups				x			x	x	x		x		x	x	x	x			
Watershed Advisory Groups				x			x	x	x		x		x	x	x	x			

Nonpoint source planning and implementation efforts for agriculture are carried out at the local level through a partnership of the SCDs, SCC and NRCS (see Introduction - Historical). SCDs are granted broad authority under Soil Conservation District law for the conservation of natural resources. In coordination with Idaho Water Quality Law, SCDs provide input to BAGS and WAGs and represent agricultural interests in drafting TMDLs and agricultural implementation plans. SCDs further assist WAGs by functioning as liaisons to private landowners. SCDs have been instrumental in initiating WAG development where none has been developed and have played a major role in the local administration of State and Federal cost share projects. Through their state (IASCD) and national associations (NACD) they are very active in the oversite of, and participation in, state and federal agricultural efforts statewide and nationally. IASCD has membership on the Board of Directors of the SCC, which enhances the ability for partnerships and cooperation with the designated agency for agricultural and grazing.

Idaho Department of Water Resources (IDWR)
The IDWR is the responsible agency for the development of the State Water Plan, stream channel, dam safety, water storage, mine tailings, and water rights permits, minimum stream flow allocation, and ground water related activities such as well drillers' licenses, well construction permits, geothermal wells, aquifer recharge, and waste disposal b injection wells. The IDWR has authority to regulate stream channel alterations under the Stream Channel Protection Act (Title 42, Chapter 38, Idaho Code) in conjunction with the Corps of Engineers, and the safety of most impoundment structures, including irrigation and stock pond facilities, and mine tailings impoundments under the Dam Safety Act (Title 42, Chapter 17, Idaho Code). Wastewater disposal by injection wells is regulated through the State Underground Injection Control Program, under Title 42, Chapter 39, Idaho Code. The IDWR also has statutory responsibility for administering the appropriation and allotment of surface and ground water resources of the state, including geothermal resources, and to protect the resources against waste and contamination, Title 42, Chapter 2, Idaho Code. IDWR also conducts statewide River Basin Studies used for long term planning related to ground/surface water interactions and use.

Idaho Transportation Department (ITD)
The Idaho Transportation Department is charged with the administration of state highways in Idaho. The ITD operates under internal rules, guidelines, practices, and Federal Highway Administration directives. They have prepared the "Catalog of Stormwater Best Management Practices for Highway Construction and Maintenance."

Local Highway Technical Assistance Council (LHTAC)
The Local Highway Technical Assistance Council (LHTAC) is a public agency created in 1994 to represent Local Highway Jurisdictions (Cities, Counties, and Highway Districts). The council is comprised of nine members, three each appointed by the Association of Idaho Cities, Idaho Association of Counties, and the Idaho Association of Highwa Districts. The staff assists Local Highway Jurisdictions (LHJ's) by providing research and data, by developing uniform standards and procedures for construction, maintenance, operation, and administration of local highways, and b representing LHJ's in conferences, meetings and hearings related to highways and other transportation factors affecting local highway system. The staff of the council serves a liaison role in working with IDEQ to develop and implement efforts to prevent and control nonpoint source pollution.

University of Idaho - Agricultural Experimental Stations
Soil, water and crop research is administered and coordinated by the University of Idaho's College of Agriculture. Research is conducted at six research and extension centers throughout the state. Research activities related to water quality include:

- nutrient use and movement;
- pesticide mobility and degradation;
- agricultural impacts on aquatic biota;
- agricultural BMP effectiveness evaluation;
- water budgeting; and
- agricultural waste products handling and disposal.

Their work ensures that the BMPs implemented by the designated agencies are properly designed to improve the situation for which they were designed. Also important to the development of specific tools are the need to gauge the effectiveness of the practice when installed as a component of a system of BMPs. These are assured by their representation on the SCC State BMP committee, IDWR Conservation Committee and many others.

University of Idaho - Cooperative Extension System (CES)
The CES is the primary agency for agricultural water quality information and education program development for the USDA under the Smith-Lever Act of 1914. Research findings are disseminated for use by land users, cooperating agencies, and the general public. Extension specialists and county extension agents assist producers with recommendations for application of fertilizers and pesticides. The CES is a prominent player in multi-interagenc efforts for development and implementation of NPS prevention and control efforts statewide. They participate in multilevel information and education, research outreach, and technical advisory for proper implementation, and follow up to measure the success of implementation activities.

Environmental Protection Agency (EPA)
EPA provides training, technical and financial assistance to the state to ensure a viable and effective NPS program. EPA works with the State and Tribes to build community-based support for protection and restoration of beneficial uses of all water resources. They also provide special assistance to the state in working with other Federal agencies and States on ecosystem-wide initiatives. Additionally, in their collaboration with the State to achieve environmental results, they provide sophisticated assistance in the areas of modeling, monitoring and design of high quality watershed projects.

USDA-Agricultural Research Service (ARS)
The ARS conducts research on the cause and effect relationship between agricultural management practices and soil and water conservation. This information is used in evaluating existing management practices, and developing new practices for improvement and protection of surface and ground water quality. Additionally, they are instrumental in the development of new tools used in planning, implementation, and evaluation of NPS protection and improvement activities.

USDA-Forest Service (USFS)
National forest system lands within Idaho are managed from two regional headquarters. The Northern Region (Region 1) is based in Missoula, Montana and has jurisdiction over the Idaho Panhandle, Clearwater, and Nez Perce National Forests. The Intermountain Region (Region 4) is based in Ogden, Utah and includes the Boise, Caribou, Challis, Payette, Salmon, Sawtooth, and Targhee National Forests.

USFS authority is embodied in numerous federal laws and regulations. The USFS is the designated management agenc for nonpoint source pollution controls on all national forest lands governed by the Organic Act (16 U.S.C.A. 551), the Multiple Use Sustained Yield Act (16 U.S.C.A. 528), the Wilderness Act, the Forest and Rangeland Renewable Resources Act, the National Forest Management Act (16 U.S.C.A. 1600), the National Environmental Policy Act (42 U.S.C.A. §§ 1600, 1611 to 1614), the Wild and Scenic Rivers Act, and the CWA. The USFS has the statutory authorit to regulate and permit land use activities on national forest lands which may affect water quality. As a designated management agency, the USFS is responsible for implementing nonpoint source pollution controls for land use activities such as silviculture, grazing permits, mining, and road construction. A MOU with the State of Idaho provides for State input and coordination with USFS activities, under the NPS program as defined in the MOU (Appendix A-2). Additionally, they are signatories to the CRMP MOU (Appendix A-5, see Introduction - Historical) which sets the stage for interagency cooperative planning and implementation relating to grazing on federal lands.

USDA Natural Resources Conservation Service (NRCS)
The NRCS provides technical assistance to private landowners in an effort to use soil, water and vegetation resources in a manner consistent with their needs and capabilities as outlined in the Soil Conservation and Domestic Allotment Act, Section 7 (Public Law 46-74; U.S.C.A. 590(3)), the Agriculture and Consumer Protection Act, Title 10, and the Agricultural Credit Act, Title 4. The NRCS also conducts natural resource surveys and assists units of government in addressing rural resource conservation and rural economic development issues. Soil conservation districts and the SCC, rely upon the NRCS as a principle cooperating agency to provide technical assistance as a means of implementing resource management goals, objectives, and priorities established at the local level. Additionally, the NRCS and FSA are responsible for administering agricultural programs outlined in the 1996 Farm Bill. The NRCS Field Office Technical Guide is recognized by the State as the technical basis for agricultural water quality and soil erosion measures.

Those NRCS BMP standards relating to water quality have been revised for Idaho and adopted into the Ag Plan. The are reviewed and revised on a 5 year cycle. NRCS chairs the State Technical Committee, as outlined above, through which the State priorities and processes are incorporated into NRCS planning and implementation activities. They co-chair the Agricultural TMDL Action Committee with the SCC and are major players in all state agricultural

implementation efforts, as well as participation in the BAG/WAG process for technical advice. The NRCS programs (PL566, FSA, EQIP, CRP, WHIP, WRP, RC&D, etc.) have been extensively integrated into State program implementation activities for many years (also see Introduction - Historical). NRCS, working with IDEQ, SCC and ISDA have been instrumental in obtaining an Idaho Nutrient Management Standard, and are conducting certification classes for multiagencies, producer groups, associations, and others to provide Comprehensive Nutrient Management Planning for agricultural operations statewide.

USDI-Bureau of Indian Affairs (BIA)
The BIA administers federal programs on Indian reservation lands. Reservations in Idaho are the Kootenai, Coeur d'Alene, Nez Perce, Duck Valley, and Fort Hall. The BIA staff includes soil and water conservation technical personnel who prepare conservation plans, and design and implement conservation practices for reservation crop, grazing, and forest lands. Additionally, surface and ground water concerns related to the CWA on tribal lands within reservation boundaries fall under the jurisdiction of EPA Regions 9 and 10. However, IDEQ along with the other state natural resources agencies actively work with the tribes throughout Idaho to mitigate the effects of nonpoint source pollution which might impact tribal waters and ultimately waters of the State. Joint efforts for stream assessments, monitoring, and implementation are ongoing efforts of the tribes, in their role as members within the BAG/WAG process.

USDI-Bureau of Land Management (BLM)
The BLM is responsible for administration, management, and protection of nearly 12 million acres of public land throughout the State of Idaho. The agency has authority to regulate, license, and enforce land use activities that affect nonpoint source pollution control from the Taylor Grazing Act, the CWA, the Federal Land Policy and Management Act, the Public Rangelands Improvement Act, the National Environmental Policy Act, the Emergency Wetlands Resource Act, the Agricultural Credit Act, the Land and Water Conservation Fund Act, and the Executive Orders for Floodplain Management and Protection of Wetlands.

The BLM is active in several interagency efforts to integrate priorities and provide implementation opportunities and tools for NPS activities, such as the State Technical Committee Sate BMP Committee, CRMP Committee, and Agricultural TMDL Action Committee. They are receivers of, and participants in several §319 grants for prevention and control of NPS pollutants.

USDI-Bureau of Reclamation (BOR)
The BOR is responsible for planning, construction, operation, and maintenance of federal irrigation projects as outlined in the Federal Reclamation Law and delegation under the CWA. Activities relating to water quality efforts include:

- technical assistance in irrigation BMP evaluation;
- water quality monitoring related to federal irrigation projects;
- coordinated resource management planning;
- implementation of structural and nonstructural water management programs and projects;
- design, financing, and construction of structural aspects of management plans; and
- the scoping of irrigation related aspects of the agricultural nonpoint source management plan.

The BOR has also been an important player in the State for many implementation projects related to enhancing fish passage, habitat, water quality monitoring, agricultural drain relocations and studies. They are participants on the State Technical Committee, Agricultural TMDL Planning Committee, and are active in other coordinated watershed management and implementation activities.

USDI-Geological Survey (USGS)
The USGS water resources division collects, analyzes, and reports general hydrologic and water quality data throughout the State. The USGS also conducts special studies upon request from various state and federal agencies on water suppl and quality in areas of changing land and water use patterns. USGS staff and their expertise are well used by the State for monitoring and modeling of water. They are major participants along with IDEQ and IDWR for efforts in ambient ground and surface water monitoring, and information used for the TMDL process.

CHAPTER 3 - ACHIEVING A BALANCED APPROACH FOR CLEAN WATER

Key element #3 states that the state will use *"a balanced approach that emphasizes statewide nonpoint source programs and on-the-ground management of individual watersheds where waters are impaired or threatened."*

As part of the State's Continuing Planning Process (IDEQ, 1998g) the Idaho Nonpoint Source Management Program serves as the umbrella for all nonpoint source related activities, providing for consistent, cross-jurisdictional coordination among the various land management agencies. However, there are clearly challenges beyond this program due to the many impaired and threatened watersheds throughout the state. Additionally, the scale of land management varies widely from the site, to the subwatershed and watershed, to basin scales. With the adoption of Water Quality Law, Idaho Code §39-3601 et. seq. (Appendix B) in 1995, Idaho entered a new era of local watershed planning and management. Under the law, community-based advisory committees have and will continue to serve the role o recommending ways to properly manage the state's watersheds.

This linking of the State NPS program objectives through the roles of the designated agencies to the local planning and implementation at the WAG/BAG level, ensures that the State obtains the balance needed to meet on-the-ground management of individual watersheds (See Agency Roles, Chapter 2).

Water Quality Law and Local Advisory Groups

Water Quality Law §39-3601 set forth a public process which created Basin Advisory Groups (BAGs) in each of the six river basins. The BAGs represent members of the forest products industry, agriculture, mining, livestock, water based recreation, nonmunicipal point source dischargers, local government, conservation groups, Indian tribes, and the general public. The BAGs review data from within the basin watersheds and make recommendations concerning:

- monitoring;
- designated beneficial use status revisions;
- prioritizations of impaired waters;
- public input; and
- establishment of a priority listing of watersheds needing pollution management.

In addition, the Water Quality Law authorized the development of Watershed Advisory Groups (WAGs) and recognized the existence of several ongoing WAGs within each of the six basins. The 18 WAGs recognized to date represent industries and interests affected by the management of their respective watershed. Their primary mission is to advise IDEQ on the development and implementation of actions necessary to achieve full support of designated beneficial uses within a timely manner. There are several items inherent within their mission that make the role of WAGs far reaching. The following are goals of WAGs according the Idaho Water Quality Law:

- required actions of each designated agency;
- implementation plans and schedules;
- estimated costs and budgets;
- strategies for coordinating ongoing planning and management programs within the watershed;
- provisions for public input and involvement; and
- procedures for evaluating the effectiveness of the implemented plan.

Water Quality Law §39-3601 also established and defined roles of other State agencies by assigning designated agencies for those activities within the State that are the major contributors of nonpoint source loadings to waterbodies. The designated, lead agency and a given WAG forward completed TMDLs to the respective BAG for review and comment. The final plan is ultimately sent to IDEQ for adoption as part of the state's water quality management plan. Subsequently, TMDL/WRAS implementation plans are sent by the WAGs to the BAGs, which rank them for each of the six basins. They are then forwarded for statewide ranking by the BAG chairmen and the IDEQ Administration. The plans are compiled into a priority list and forwarded to EPA with a recommendation for §319 funding. IDEQ adopts and implements the plans according to overall statewide priorities, as funding is available.

The designation of lead state agencies provides an ability to target projects and programs toward specific activities. B working through the designated agencies the State also gains statewide consistency in adoption and application o prevention and restoration activities. Additionally, it ensures that any given agency has a recognized responsibility for a consistent and uniform approach for dealing with their constituency. Inclusive of the roles for these agencies are other state and federal programs with funding sources, recommended BMPs, regulatory and nonregulatory components, and indicators of program achievements, available at their disposal to help ensure meeting the state standards for water quality. These State designated roles are also significant in that the designated agencies automatically partner with those federal agencies having similar traditional roles, such as the agricultural partnership of the SCC and SCDs with the NRCS. Setting of similar goals, priorities, and program requirements has enhanced the ability of all partners to get the job done, stretched available funding, and ensured state/federal consistency in approaching the challenges posed b nonpoint source pollution and TMDL implementation.

IDEQ and other involved agencies benefit through the advice of the BAGs and WAGs, by gaining an incredible amount of input for the enhancement and focusing of all watershed based actions. Most of these advisory committees meet monthly and are very active in integration of water quality activities within their basins and/or watersheds. As integral components of the BAG/WAG process, technical committees of State and Federal agencies help with planning and development of local priorities and direction for water quality protection and restoration based on state and federal guidance, BAG/WAG input, and the State NPS Plan. Examples of these interagency committees for statewide priorit setting and inclusion into ongoing processes are the Ground Water Cooperative Agreement Implementation Group, Agricultural Groundwater Coordination Committee, NRCS State Technical Committee, the State BMP Committee and the Agricultural TMDL Technical Committee.

This approach goes a long way towards rectifying the fragmented nature of resource management by achieving a satisfactory level of rational local comprehensive planning and compatible institutional arrangements to facilitate watershed planning and ultimate implementation. This arrangement also affords the opportunity for input from various interest groups, includes state and federal agencies, and serves as a vehicle for ensuring that these locally developed plans are compatible with the physical environment, reflect social and economic values, and meet the desirable technical goals of sound watershed management.

Unified Watershed Assessment

Unified assessments of water quality and watershed conditions will help make the assessment process more efficient and accountable. A watershed approach enables the balancing of improving impaired water bodies and preventing further impacts to threatened and fully supporting waters. In taking the lead in a balanced watershed approach, the State o Idaho has prepared a single, Unified Watershed Assessment (Appendix A-7). The assessment draws on a range o available information to:

- assess the health of watersheds and identify those requiring restoration;
- identify watersheds needing preventive actions to sustain water quality using ongoing state, tribal, and federal programs; and
- identify pristine or sensitive aquatic system conditions on federal, state, and tribal lands needing extra measures of protection, and
- identify; processes and activities ongoing, areas of need, and integration opportunities for efforts to maximize benefits to water quality.

As of the June 1998 USDA/EPA Unified Watershed Assessment Framework, “watersheds” throughout the State have been categorized at the sub-basin scale. Most of Idaho’s subbasins, seventy-eight of eighty-four, have waters that do not meet water quality standards. These subbasins have been listed on the State’s 303(d) list (Category 1). Total maximum daily loads (TMDLs) will be prepared in accordance with the 303(d) list schedule over the next seven years or by the year 2005. Further, the assessment recognized three subbasins meeting goals but needing action to sustain water qualit (Category 2).

Total maximum daily loads are watershed-based analyses of the quantities and sources of pollutants which prevent a water from meeting its beneficial uses. The aim is to restore those uses through reductions of pollutants. With a subbasin approach all waterbodies and pollutants on the current 1998 303(d) list within a hydrologic subbasin will be addressed

individually in a document. The overall TMDL process follows a logical sequence of assessment, analysis, and planning for each subbasin with three steps:

- subbasin assessment—defines the problem at the geographic scale of the 4th field hydrologic unit;
- loading analysis—estimates a waterbody's pollutant load capacity, a margin of safety, and allocates loading on a source basis; and
- implementation plan(s)—details actions necessary to achieve load reductions in conjunction with a schedule, and specify monitoring needs.

With a subbasin approach all waterbodies and pollutants on the current 303(d) list within a hydrologic subbasin will be addressed in a single document. The State of Idaho intends to develop TMDL analyses for all water quality limited waters on its' 1998 Clean Water Act §303(d) list, unless subsequently de-listed, by the end of 2005. There are 84 subbasins which are entirely or partially within Idaho.

The TMDL Process

The order and pace of TMDL development is presented in the State of Idaho eight year TMDL schedule agreed to on April 8, 1997 (TMDL Guidance, Appendix C). The State of Idaho will also develop TMDLs for waterbodies determined to be water quality limited subsequent to the 1996 list. Where possible, additions to Idaho's §303(d) list will be addressed along with currently scheduled waters in the same subbasin, otherwise a separate date will be specified.

In Idaho's eight-year schedule, forty-two high priority waterbodies are scheduled individually for completion by the end of 1999. Remaining medium and low priority waterbodies are scheduled, subbasin by subbasin, to be completed by the end of 2005. This schedule is based on calendar years and TMDLs are due to be submitted to the Environmental Protection Agency (EPA) no later than December 31 of the year scheduled (Table 3.1). Totals are provided by year and by region, based on Idaho's 1998 303(d) List. The final total of subbasins focused on by 2005 is 71 or 878 water qualit limited segments.

Table 3.1 Summary of the numbers of subbasins focused on each year by regional office.

	1999	2000	2001	2002	2003	2004	2005	TOTAL BY REGION
Coeur d'Alene	2	2	1	1	1	2	2	11
Lewiston	3	2	1	2	2	1	2	13
Boise	2	3	3	2	2	2	1	15
Twin Falls	2	1	1	2	2	1	1	10
Pocatello	1	2	1	1	1	2	0	8
Idaho Falls	2	3	2	2	1	3	1	14
TOTAL BY YEAR	12	13	9	10	9	11	7	**71**

By addressing all water quality limited waterbodies on the current §303(d) list in a given subbasin at once an econom of scale in document preparation and review is sought. Furthermore, it is believed such aggregation will often reflect similarities in water quality problems, pollutant sources, and available information that will facilitate timely assessment. Making subbasin assessment the first step allows distinction of waterbodies which are truly water quality limited from those which are documented to be meeting water quality standards. To the extent possible, the subbasin assessment also identifies which pollutants are truly factors in causing impairment of beneficial uses, and the sources of those pollutants. In this way subsequent loading analysis is better defined.

A loading analysis is needed only for those waterbodies and their watersheds which are documented in the subbasin assessment to be water quality limited, and only for those pollutants causing impairment. In addition to a loading

capacity and allocations, a loading analysis sets out a general pollution control strategy and an expected time line for meeting water quality standards. The combination of subbasin assessment and loading analysis constitute the TMDL as required under §303(d) of the Clean Water Act.

Implementation plans are an essential third step in the process of restoring beneficial uses and assuring compliance with water quality criteria. They are not part of a TMDL submitted to EPA. These plans lay out a schedule of specific actions to be undertaken. They are to be developed within 18 months of EPA approval of a TMDL, and in accordance with the water quality goals and load allocations provided in a TMDL. Monitoring to ascertain achievement of water qualit goals will be an essential part of implementation plans. Instream monitoring and assessment of water quality is the responsibility of IDEQ. Monitoring the implementation and effectiveness of specific source control actions is the responsibility of designated state agencies as defined in IDAPA 16.01.02.003.23.

Implementation of an approved TMDL is primarily the responsibility of designated agencies, as stated in Idaho Code 39-3612, in cooperation with landowners and managers. These designated agencies are defined in Idaho Code 39-3602 as the Department of Lands (IDL), for timber harvest, oil and gas exploration and development, and for mining; the Soil Conservation Commission (SCC) for grazing and agriculture; the Idaho Transportation Department (ITD) for public roads; the State Department of Agriculture (ISDA) for aquaculture; and the IDEQ for all other activities.

Development of TMDLs will be in accord with the provisions of the federal Clean Water Act, Idaho Code 39-3601 *et seq.*, and all other applicable laws. The Idaho Division of Environmental Quality (IDEQ) is the lead agency for development of TMDLs for Idaho waters. However, the Environmental Protection Agency (EPA) will have a role in coordinating multi-jurisdictional TMDLs involving interstate or tribal waters (see Agency Roles, Chapter 2).

Funding of TMDL implementation plans will require a major effort from all state and federal partners. For TMDL/WRAS plans to be funded under §319, the plans have to go through the following review criteria.

Annual and Multi-year Workplans

Idaho uses a two step technical project selection review process to ensure that both specific priority watersheds and activities of statewide nature are balanced. The review process is tied directly into Idaho's TMDL and the approved state §303(d) listing process, but also recognizes the importance for protection of ground water, special resource waters, and threatened and endangered species to the healthy functioning of a complete water quality system. An example copy o the state's ranking criteria and schedule is included in Appendix F. The specific evaluation criteria may be modified as necessary to reflect the changing water quality priorities within the state.

The first part of the project review is general evaluation to determine if the projects meet the following criteria:

- Complies with all state and federal requirements (including funding match);
- Meets the goals of the State Nonpoint Source Management Program Plan;
- Provides a detailed work plan and implementation schedule;
- Is based on credible data;
- Provides a maintenance agreement that extends beyond the life of the project; and
- Includes a monitoring element that extends beyond the life of the project.

Those projects failing any portion of the general evaluation are not included in the technical review.

Secondly, the technical review is heavily weighted towards the implementation of best management practices and the criteria grades each project based on major and minor project elements. The major elements include:

- Relationship to the implementation of approved TMDLs or other special water quality efforts (e.g., Governor's Bull Trout Conservation Plan);
- Identification of the BMPs to be implemented;

- Identification of the status of the ground or surface water, implication to a threatened or endangered species, impacts to an outstanding resource water, or impacts to a sensitive or general resource ground water;
- Identification of the severity to beneficial uses (e.g., number of stream miles or acres affected, health and safety impacts to ground water); and
- Estimation of the restoration potential (e.g., percent improvement expected based on project implementation).

The technical review of minor elements include:

- Identification of the number of impacted beneficial uses;
- Ability of the project technologies to be transfer to other sites within the state;
- Recognition of the special status of water (e.g., State Park, outstanding resource water, high ground water vulnerability area, etc.);
- Evaluation of the environmental stewardship component; and
- Summation of the community/agency support for the project.

Based on the technical review, points are awarded for each major and minor review category. Each potential project receives a numerical score, which allows a statewide ranking of proposals. The projects are then rank ordered by the BAG for each individual basin based on local priority needs, and submitted to IDEQ. Final project selection is made at a meeting of all the BAG chairs and IDEQ upper management. Using this system the State has been able to achieve a balance between statewide initiatives and on-the-ground implementation projects. Idaho will continue to use this review and project selection method for determining the balance between statewide initiatives and on-the-ground implementation projects. The IDEQ remains responsible for the NPS program implementation and as such, while looking out for the greater interests of the State, may choose not to implement the advice of the BAGs in its funding o NPS projects.

Tracking Statewide and Watershed Projects

Idaho has long realized that unregulated nonpoint pollution sources contribute to reduced water quality. The Idaho Nonpoint Source Management Program uses its §319 grants funding for various nonpoint source management projects (Figure 3.1). From 1990 through the 1999 program year the NPS Management Grants Program allocated approximatel $16 million in combined private, local, state, and federal monies. Projects have included:

- BMP Implementation;
- Technical Assistance;
- Protocol Development;
- Ground Water Monitoring;
- Information; and
- Education.

Past funding cycles include a wide variety of projects. From 1990 through federal fiscal year 1999, Idaho has funded over 125 projects with the projects from 1997 through 1999 summarized in Tables 8.1 through 8.3. The projects listed in Tables 8.1 through 8.3 reflect the variety and diversity of Idaho's Nonpoint Source Program. Idaho endeavors to seek and fund a balance of projects that protect the beneficial uses of both surface and ground water. Additionally IDEQ strives to balance the management and objectives of the program, with the local BAG/WAG watershed implementation needs.

An example of this balanced approach, for which the NPS Program is striving to attain for all TMDL/WRAS implementation activities, is reflected in the Paradise Creek TMDL Implementation Plan attached as Appendix G.

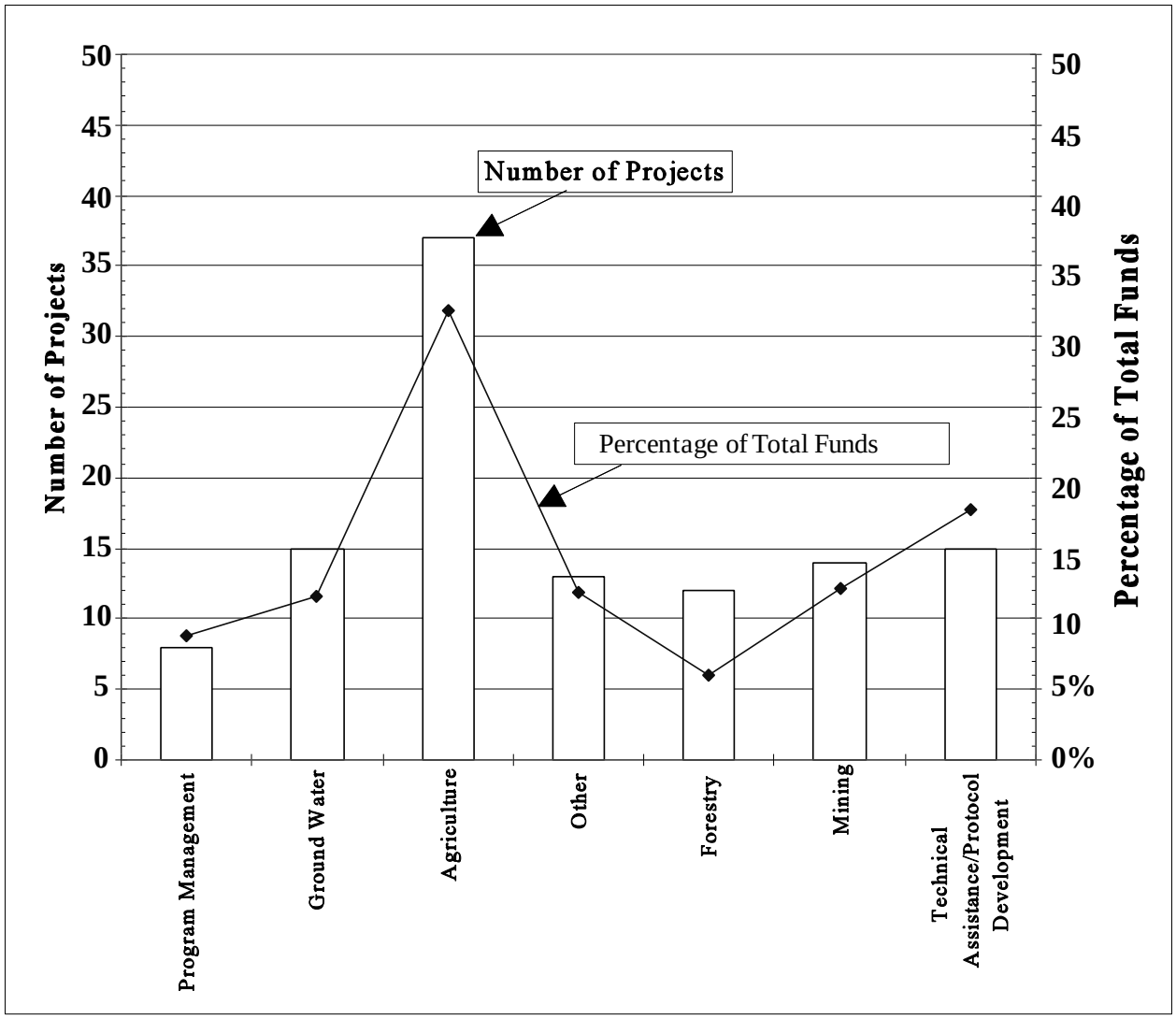

Figure 3.1 Distribution of §319 projects versus funding through 1997.

CHAPTER 4 - TAKING PROGRAM PLANNING TO ACTION

Key element #4 states that the *"state program (a) abates known water quality impairments resulting from nonpoint source pollution, and (b) prevents significant threats to water quality from present and future activities."*

Identification of the waters and watersheds impaired or threatened by nonpoint source pollution and an outline of the process used to progressively address those waters is included in Chapter 5. Once those waters and watersheds have been identified and prioritized, nonpoint source prevention and abatement activities can be initiated.

The State of Idaho utilizes a variety of legislative and programmatic approaches to protect its waters. Idaho Code §39-3601 et. seq. (Appendix B.) sets the current standard for regulatory action for surface water bodies where beneficial uses are not fully supported. Water bodies that are listed as a "high" priority indicate that unless remedial actions are taken in the near term, there will be significant risk to designated or existing beneficial uses. "Medium" priority water bodies are where water quality data indicates that unless remedial action is taken, there will be risks to designated or existing beneficial uses. "Low" priority water bodies are where limited or subjective water quality data indicates designated beneficial uses are not fully supported, but risks to human health, aquatic life, or the recreational, economic or aesthetic importance of a particular water body is minimal. This legislation provides one of the key ingredients of the nonpoint source management program by identifying waters within the state affected by nonpoint source pollution. This rating from high to low priority affects the TMDL development schedule and impacts the technical evaluation scores of each proposed project. The higher the priority of the water body, the quicker a TMDL is scheduled for development, and the higher the technical evaluation score will be for the proposed project.

The State's TMDL process and nonpoint source management program are intimately linked through the regulatory and non-regulatory components of the CWA and the state water quality standards. The TMDL process provides the necessary loading data for impaired waterbodies while the nonpoint source management program acknowledges the appropriate BMP documents, allows owner/operators to selectively choose BMPs best suited to their individual economic, social and water quality objectives; and provides incentives to implement the BMPs on threatened or impaired waters.

As an umbrella program, the Idaho Nonpoint Source Management Program is responsible for coordinating all nonpoint source activities. The primary purposes of the Idaho Nonpoint Source Management Program are to provide comprehensive direction on priorities and implementation guidance for addressing impaired or threatened water qualit (see TMDL Guidance, Appendix C and Draft Implementation Guidance, Appendix D).

In keeping in step with the *Clean Water Action Plan* (EPA, 1998), the IDEQ is calling for other state agencies, tribes, and federal agencies to affirmatively engage watershed management as a "core, guiding principle for water qualit management." Furthermore, the State is utilizing the NPS plan to encourage the adoption of the States No-Net Increase Policy PM98-2. This antidegradation policy encourages the adoption of BMPs, or knowledgeable and reasonable measures, to prevent discharges of point and nonpoint source pollutants prior to TMDL/WRAS development. Today, there is a growing recognition for the need of better coordination among the varied public agencies involved with water and land management. In fact, this growing recognition for better coordination can be fully realized with tailoring implementation strategies at the watershed level. It has been repeatedly shown that a watershed approach is the most pragmatic and effective means of solving multiple problems and accomplishing diverse water quality objectives.

Idaho's TMDL Implementation Strategy

An implementation plan identifies and describes the specific pollution controls or management measures to be undertaken, the mechanisms by which the selected pollution control and management measures will be put into action, and describes the authorities, regulations, permits, contracts, commitments, or other evidence sufficient to ensure that implementation will take place. The plan also describes when implementation will take place, identifies when various tasks or action items will begin and end, when mid-term and final objectives will be met, and establishes dates for meeting water quality targets.

Application of effective BMPs is crucial to achieving the pollutant load reductions and targets of the TMDL. Consequently, the implementation plan, to the extent practicable, must be explicit about which BMPs or systems o BMPs will be employed to achieve the targets, where and when the BMPs will be employed, and how application of the BMPs will achieve the stated targets. EPA guidance specifically identifies several criteria by which BMPs will be judged:

- A data-based analysis showing that the selected BMPs have been demonstrated to be effective in addressing the issue or pollutant in question (i.e., a history of successful application in similar situations);
- An explanation of the mechanisms by which application of the BMPs will be assured; and
- A plan for tracking the implementation and effectiveness of the BMPs.

The IDEQ and the other designated natural resource agencies will use these criteria in evaluating the likelihood that selected BMPs will achieve the targets and load reductions specified in the TMDL. The selection of BMPs may be ver site-specific, and may change over time in response to changing conditions, opportunities, land manager preferences, and lessons learned. To the extent that BMPs can be anticipated to change over time, the TMDL implementation plan must describe the decision making process by which future BMPs will be selected, how effectiveness monitoring and other inputs will factor into the selection, and how interested stakeholders will be involved in the decisions. Effective TMDL implementation plans generally are designed to be flexible and adaptable over time. Therefore, it may be most appropriate to include detailed descriptions of the BMPs in an addendum.

While it is recognized that TMDL implementation is crucial to water quality improvement, it is not currently part of a TMDL submitted to EPA for approval. An implementation plan is a separate document, which is guided by an approved TMDL.

Timeline for Implementation

Implementation plans are to be developed within 18 months of EPA approval of the TMDL and in accordance with the water quality goals provided in a TMDL package. Each associated implementation work plan should contain a Time line with dates for starting and completing the work, and appropriate milestones for interim products. The discussion o midterm reviews and effectiveness evaluations is particularly important. Pursuit of TMDL targets and application of the BMPs may take years, perhaps decades. It may also be desirable to break implementation of the plan into logicall sequenced phases.

Implementation will be unique in each subbasin, but two general guidelines apply:

- Address the causes of problems rather than remediate the symptoms or effects; and
- Work from the top of the watershed on down (e.g., upstream before downstream, tributaries before the main stem).

However, adhering rigidly to these first two guidelines can slow down implementation unnecessarily, so also keep the next two guidelines in mind:

- Implementation may be faster and more efficient if measures are applied simultaneously across a whole watershed or if measures are implemented at selected sites throughout the watershed in a carefully considered and coordinated way; and
- Where irreplaceable resources such as threatened or endangered aquatic species are at immediate risk, the implementation plan should move as quickly as possible to enhance critical water quality conditions.

Identification of Participants

The implementation plan must identify the roles, responsibilities, and commitments of the various public and private participants. This will be achieved largely through the description of the implementation plan's objectives. However, other more general commitments from supporters may be worth indicating. For example, certain entities may commit resources to monitoring, public information sharing, technical assistance, and administrative oversight. As outlined throughout the NPS plan and under §39-3601 the public is included and has specific roles through all planning and implementation activities.

Discussion of Costs and Funding
Each TMDL must estimate the costs associated with plan implementation. An implementation plan with no funding will result in little or no action. The plan should identify potential sources of funding, the mechanisms by which those sources will be tapped, and who will conduct the fund raising effort. Funds may come from any public or private source, and will include the investments made by loans, the landowners themselves, grants, cost-share funds, in-kind contributions, and donations. The plan should explore the potential to raise funds both outside and inside the watershed. This chapter includes a listing of local, state, and federal programs which may provide funding or other resources to help with nonpoint source implementation efforts.

Maintenance of Effort Over Time
It is important for the stakeholders to demonstrate an ongoing commitment to long-range implementation. This commitment to ongoing implementation should also be reflected in a number of the plan's elements. These elements could include long-term conservation agreements, maintenance contracts, long-term conservation easements, modifications or revisions to existing land use plans, revisions to or new land use ordinances to name but a few. However, it is beyond the scope of this document to describe how each individual plan will accomplish this task.

In most cases, the problems leading to water quality limitations and §303(d) listing have accumulated over man decades, and may require a number of years to remedy. Some management actions can produce measurable, even visible results within a year or two. However, it may take many years to implement the type of wide scale treatments often necessary to improve water quality throughout a watershed. Additional years of continued effort and maintenance may be necessary before the practices have their desired effect of achieving and maintaining water quality standards and full beneficial use support.

Monitoring and Evaluation
Monitoring for implementation and effectiveness of the TMDL should be guided by targets and load allocations derived from given TMDLs. The approach should track implementation of the selected pollution control measures, collect and analyze information on the effectiveness of the specific measures at achieving water quality goals, and provide feedback to an "adaptive management" process. The types of monitoring which may be needed include chemical, biological, and physical parameters depending on the watershed in question. The watershed advisory group implementing the TMD should work closely with the designated agencies to ensure that monitoring efforts within the watershed are not duplicated. Cooperative monitoring of implementation activities by IDEQ and others will be an essential component to ensuring the achievement of water quality goals. Agencies, such as IDEQ, have specific monitoring responsibilities (e.g., the IDEQ Beneficial Use Reconnaissance Project, and other pre and post implementation watershed monitoring; ISDA is implementing an agricultural TMDL water quality monitoring program jointly with SCC, SCDs, and IASCD (Appendix E)).

In a phased TMDL, adequate monitoring also provides specific data needed to refine and improve initial loading capacity and allocations. The *Coordinated NPS Water Quality Monitoring Program for Idaho* (IDEQ, 1990) still presents a relevant tool and guideline for coordination and review of NPS activities on federal lands.

A high degree of commitment to ongoing monitoring for project effectiveness is an important element of the implementation plan. IDEQ's Beneficial Use Reconnaissance Project systematically reviews the beneficial use status o Idaho's water ways. Effectiveness monitoring should evaluate the results of implementing various management approaches and document long range water quality improvements and beneficial use support trends. This along with site specific BMP effectiveness data collected by the designated agencies as listed in Idaho Code §39-3601 et. seq. for each NPS category will substantially cover the implementation monitoring needs of the state.

It is very important to use monitoring results in a well thought out feedback loop process to evaluate the effectiveness o the actions and improve the TMDLs and implementation plans in general. Dates for interim project reviews must be built into the implementation timetable. Similarly, the monitoring plan must include at least a brief discussion of how and by whom the collected data will be analyzed and how the results will be used to make and incorporate revisions in the TMDL.

Public Involvement
Each watershed will have a unique set of interested and affected persons with a stake in developing and implementing the TMDL. The public must be involved in all steps of TMDL development, but are most heavily involved in implementation. Ideally, those who will be most closely involved in implementation should be involved in development of the implementation plan. The point is to seek as much public and private support for the implementation plan as possible in order to maximize its likelihood of success. Interested stakeholders may include local land owners, other residents of the watershed, local governments, special districts, state and federal agencies, natural resource stewardship groups with local interests, and others. It is important to note that in addition to those who manage land in the watershed there are other people who will be affected by the TMDL and who will have an active interest in the aquatic resources being treated. Many of these people may have important contributions to make to the successful implementation of the plan.

Many private land owners and managers are understandably reluctant to have other people become involved in their private management decisions, but such interference is not the point of a TMDL or implementation plan. Rather than offering up every private land management plan for review, the emphasis instead should be on a general understanding of the condition of the watershed, what needs to be done within each land use type on an area-wide basis, and how everyone in the watershed can work together in a mutually supportive way, and with the recognition that surface waters of the state are public resources of concern to all. Although specific management measures for the watershed must be identified in the TMDL implementation plan, there is no requirement that they be approved by any public process.

To address these concerns Idaho adopted the Water Quality Law (Idaho Code §39-3601 et. seq.) to provide direction for local watershed planning and management. Under the law, appointed community-based BAGs, recommend water quality objectives to the IDEQ concerning monitoring, designated beneficial use status revisions, prioritization o impaired waterbodies, and solicitation of public input. Local stakeholder based WAGs are appointed by IDEQ with advice from the appropriate BAG. WAGs advise IDEQ on the development and implementation of TMDLs so that within a reasonable period of time beneficial uses are fully supported (See Introduction and Chapter 3).

Addressing Diverse Program Dimensions

The State Nonpoint Source Management Program addresses a wide range of nonpoint source categories and subcategories. The various categories include: agriculture, silviculture, urban runoff, construction activities, transportation, resource extraction, sewage and land disposal, hydrologic/habitat modification, recreation, and ground water (e.g., subsurface sewage disposal, industrial chemicals, wellhead protection, and source water assessment).

By its very nature, nonpoint source pollution is diffuse and may not be easily characterized. Therefore, as the watershed advisory group meets to begin the development of the implementation plan the watershed advisory group must carefull analyze the group of BMPs necessary to restore beneficial uses. However, the listing of BMPs should be broad enough to allow the individual cooperators within the basin the flexibility to choose BMPs which will complement their operations while helping to restore beneficial uses. The watershed advisory groups will need to work closely with each of the designated agencies and local organizations to ensure that the developed plan can and will be implemented.

Coordinating Action

As a result of existing programs or mandates, certain agencies and organizations are particularly likely to take the lead on TMDL implementation. Idaho Code §39-3601 et. seq. specifies certain entities as the designated agencies for various land use activities. In addition to the statewide coordination and priority setting with IDEQ, these designated agencies will take the lead in coordination with their federal counterparts for the lands for which they have a common interest. These designated agencies include the Department of Lands for timber harvest and mining activities, the Soil Conservation Commission for grazing and agricultural activities, the Department of Transportation for public road construction, the Department of Agriculture for aquiculture, and IDEQ for all other activities (See Roles Chapter 2). Over the next year Idaho will work with EPA to facilitate the coordination of funding and to prioritize restoration effects with the Tribes on waters which lie within Indian Reservations, or otherwise have a special Tribal interest. Likel

federal agencies include the FS, BLM, F&WS, and NRCS. Local organizations may include cities and counties, soil and water conservation districts, irrigation districts, and other groups.

There are many scenarios were federal agencies are involved in watershed restoration activities. For example, the NRCS assists under the PL-566 land treatment watershed plans, Environmental Quality Incentive Program (EQIP) geographic priority plans, coordinated resource management plans, and other related efforts (see Introduction, Cooperation and Roles, Chapter 2.). The ICBEMP project by the FS and BLM, which call for watershed analysis and other types o landscape level analyses can help further define and direct restoration priorities. The F&WS and National Marine Fisheries Service (NMFS) biological opinions, recovery plans, and habitat conservation plans for federally listed fish and aquatic species will also target and identify appropriate watershed protection and restoration measures.

Linking Nonpoint Source Pollution Actions

Idaho's many water quality partners provide valuable technical and financial assistance in carrying out the nonpoint source program. These voluntary programs when implemented at the watershed level provide the means to restore, protect, and maintain the beneficial uses of the State surface and ground water. These programs when combined with other required elements of the CWA (e.g., TMDLs/WRASs) provide the basis for restoration and protection of water quality and beneficial uses. As described in Chapter 2, IDEQ provides technical and financial support to many of the agencies responsible for the coordination of these programs to ensure that the State water quality concerns are adequately addressed. Additionally, as part of its statewide approach IDEQ works in conjunction with all entities to conduct joint outreach efforts through workshops, meetings, and conferences (such as Water Quality 2000).

The following is a brief summary of some of the ongoing programs currently used to abate nonpoint source pollution and is not meant to minimize or undermine the importance of those state, federal, local or tribal programs which have not been included in this chapter. Many of these programs have been integrated (such as joint PL566 and SAWQP projects, See Introduction and Chapter 2) to ensure adequate implementation coverage, and ensure all land owners are able to participate and implement BMPs at some level. Additionally, programs such as the Idaho Storm Water Program, Wellhead Protection Program, and the Source Water Assessment Program exclusively focus on *preventing* significant threats to water quality. An example of integration of a prevention program might be the *Idaho Farm/Home*A*Syst* (IASCD, 1995). It has been used in many ongoing programs to ensure homeowner awareness for protection of their water supply from impacts due to the storage and mixing of pesticides or fertilizers at the wellhead, confinement o livestock, or failures from septic systems. Additionally the Clean Lakes Program Phase I and Phase II projects have been widely used in the State for raising the awareness of NPS impacts to waterbodies through monitoring and assessments. Follow up implementation activities has been an important tool to the State used to prevent or mediate those impacts.

Interagency integration of these available tools represents the key to ensuring all interest groups will participate and that all resource concerns are addressed. Each of these listed programs provide important tools which will provide unlimited opportunities for interagency coordination and cooperation for of the many TMDL/WRAS implementation plans needed to completely meet water quality standards in Idaho. An example of use of the cooperation and multiprogram approach for TMDL implementation is attached as the Paradise Creek TMDL Implementation Plan (Appendix G).

- *§104(b)(3)...Tribal and State Wetland Protection Grant, EPA*
  This program provides financial assistance to state, tribal, and local government agencies to develop new wetland protection programs or refine and improve existing programs. All projects must clearly demonstrate a direct link to improving an applicant's ability to protect, restore or manage its wetland resources.

- *§303 (d)...Water Quality Planning and Management, IDEQ/EPA*
  Water quality standards and implementation plans including review and revision of standards, water quality limited segments, total maximum daily loads, the continuing planning process, and thermal limits. §303 (d) requires states to prepare a prioritized list of water quality limited segments not meeting state water quality standards.

- *§314 Clean Lakes Grants, EPA/IDEQ*
  This program has provided financial assistance for: a) Phase 1, for the study and identification of lake water qualit problems, and development of restoration plans to address those problems, and b) Phase II, funding for implementation and restoration activities. There is a potential for this to again be a valuable tool available through increased funding under §319 for lake work and associated activities such as; monitoring, volunteer monitoring, fishery and habitat projects, exotics, etc.

- *§319 (h)...Nonpoint Source Grants, EPA/IDEQ*
  This program provides financial assistance for the implementation of best management practices to abate nonpoint source pollution. The IDEQ manages the NPS program. All projects must demonstrate the applicant's ability to abate NPS pollution through the implementation of BMPs.

- *Aquatic Ecosystem Restoration, CoE*
  Section 206 of the Water Resources Development Act of 1996, provides financial assistance for aquatic and associated riparian and wetland ecosystem restoration and protection projects that will improve the quality of the environment. There is no requirement for an aquatic ecosystem project to be linked to a Corp of Engineers project. The program does require that a non-federal interest provide 35% of construction costs, including all lands, easements, right-of-ways and necessary relocations. The program also requires that 100% of the operation, maintenance, replacement, and rehabilitation be borne by the non-federal interest. The program limits the amount of federal assistance to $5 million for any single project.

- *Challenge Cost-share Program, BLM*
  This program provides 50% cost-share monies on fish, wildlife, and riparian enhancement projects to non-federal entities.

- *Conservation Operations Program (CO-01), NRCS*
  The CO-01 program provides technical assistance to individuals and groups of landowners for the purpose o establishing a link between water quality and the implementation of conservation practices. The NRCS technical assistance provides farmers and ranchers with information and detailed plans necessary to conserve their natural resources and improve water quality.

- *Conservation Research and Education, NRCS*
  The Conservation Research and Education program was created through the 1996 Farm Bill and is administered b the National Natural Resources Conservation Foundation. The purpose of the program is to fund research and educational activities related to conservation on private lands through public-private partnerships.

- *Conservation Reserve Program (CRP), NRCS*
  The CRP program provides a financial incentive to landowners for the protection of highly erodible and environmentally sensitive lands with grass, trees, and other long-term cover. This program is designed to remove those lands from agricultural tillage and return them to a more stable cover. This program holds promise for nonpoint source control since its aim is highly erodible lands.

- *Conservation Technical Assistance (CTA), NRCS*
  Technical assistance for the application of BMPs is provided to cooperators of soil conservation districts by the NRCS. Preparation and application of conservation plans is the main form of technical assistance. Assistance can include the interpretation of soil, plant, water, and other physical conditions needed to determine the proper BMPs. The CTA program also provides financial assistance in implementing BMPs described in the conservation plan.

- *Cooperative Studies Program, USGS*
  The Cooperative Studies Program provides for up to 50% cost-share on water quality and water quantities studies.

- *Ducks Unlimited Marsh Projects, Ducks Unlimited*
  Ducks Unlimited is committed to wetland habitat development through their funding and implementation efforts. The Ducks Unlimited Marsh Project has been active in Idaho and cost shares on the development and/or enhancement of wildlife habitat or wetlands.

- *Environmental Quality Incentives Program (EQIP), NRCS*
  EQIP is a program based on the 1996 Farm Bill legislation and combines the functions of the Agricultural Conservation Program, Water Quality Incentives Programs, Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. EQIP offers technical assistance, and cost share monies to landowners for the establishment of a five to ten year conservation agreement activities such as manure management, pest management, and erosion control. This program gives special consideration to contracts in those areas where agricultural improvements will help meet water quality objectives.

- *Environmental Restoration, CoE*
  Section 1135 of the Water Resources Development Act of 1986 provides for modifying the structure, operation, or connected influences or impacts from a Corp of Engineer project to restore fish and wildlife habitat. The project must result in the implementation or change from existing conditions, and the project benefits must be associated primarily with restoring historic fish and wildlife resources. Though recreation cannot be the primary reason for the modification, an increase in recreation may be one measure of value in the improvement to fish and wildlife resources. The program requires a non-federal sponsor which can include public agencies, private interest groups, and large national nonprofit organizations such as Ducks Unlimited or the Nature Conservancy. Operation and maintenance associated with the project modifications are the responsibility of the non-federal sponsor. Planning studies, detailed design, and construction are cost shared at a 75% federal and 25% non-federal rate. No more than $5 million in federal funds may be spent at a single location.

- *Farm Services Agency Direct Loan Program, FSA*
  This program provides loans to farmers and ranchers who are unable to obtain financing from commercial credit sources. Loans from this program can be used to purchase or improve pollution abatement structures.

- *Flood Plain Management Services, CoE*
  Section 206 of the Flood Control Act of 1960 authorizes the Corp of Engineers to provide information, technical assistance and guidance upon request to states and local communities to reduce flood damages by informing people who live and work in the flood plain of its hazards, and what actions they can take to reduce property damage and prevent the loss of life.

- *Flood Risk Reduction, FEMA*
  The Flood Risk Reduction program authorizes FEMA to develop voluntary contracts that provide a lump sum payment to producers who farm land with a high flood potential. In return for the lump sum payments, the producer agrees to comply with applicable wetlands and high erodible land requirements.

- *Forest Incentives Program (FIP), NRCS*
  The FIP program is designed to help small private landowners increase timber production on private-owned, nonindustrial, forest lands. Cost-share funds can be used for a variety of purposes including tree plantings, improving a stand of trees, and site preparation for natural regeneration of trees.

- *Forest Service Challenge Cost-share Program, USFS*
  This program focuses on fish and wildlife habitat improvements with funds being cost-shared to any non-federal entity.

- *Forest Service Soil and Water Improvement Program, USFS*
  This program includes funds to complete improvement projects designed primarily to reduce erosion and sedimentation, and meet targets identified in National Forest System Land Management Plans.

- *Ground Water Program, IDEQ*
  The ground water program provides the statewide leadership role for ground water protection through the implementation of the Ground Water Quality Rule, regional and local monitoring, wellhead protection program, and through technical and educational assistance to local, city, county, and state governments.

  In 1989, the Idaho Legislature enacted the Ground Water Quality Protection Act creating a Ground Water Qualit Council that developed the state Ground Water Quality Plan. The plan includes six key policy areas and a section on development of a ground water quality monitoring program for the State. The six key ground water policies o the State of Idaho are:

  - Maintain and protect the existing high quality of the State ground water;
  - Prevent contamination of ground water from all regulated and nonregulated sources of contamination to the maximum extent practical;
  - Provide educational programs on ground water protection, prevention of ground water contamination, and ground water restoration;
  - Provide information and encourage public participation in applicable activities related to ground water quality protection;
  - Implement and maintain an ongoing statewide ground water quality monitoring network; and
  - Conduct remediation when feasible and appropriate where contamination resulting from human activities produces a significant potential for the impairment of an existing or protected beneficial use of ground water.

  The IDEQ developed the Ground Water Quality Rule in 1996 using a negotiated rule making procedure. This rule establishes minimum requirements for the protection of ground water through ground water quality standards and an aquifer categorization system. The rule contains numerical and narrative standards which apply to all ground water in the state, with the numerical standards being based on the maximum contaminant levels established under the federal Safe Drinking Water Act. The plan, act, and rule provide the underlying guidance for protection of the State's ground water from nonpoint source contamination.

- *Hydrologic Unit Areas* (HUAs), *NRCS*
  The NRCS is responsible for the HUA water quality projects. The purpose of these projects is to accelerate technical and cost-share assistance to farmers and ranchers in addressing agricultural nonpoint source pollution.

- *Idaho Riparian Tax Credit (RTC) (Idaho Code §63-3024B), Interagency State Tax Commission*
  The purpose of RTC program is to provide a public and private partnership for the improvement, repair, and rehabilitation of forest, range, and farm lands. Through tax incentives, landowners are encouraged to fence, set aside, or otherwise improve lands to enhance riparian health.

- *Idaho Water Resources Board Financial Programs, IDWR*
  The Idaho Water Resources Board Financial Program assists local governments, water and homeowner associations, non-profit water companies, and canal and irrigation companies with funding for water system infrastructure projects. The various types of projects that can be funded include: public drinking water systems, irrigation systems, drainage or flood control, ground water recharge, and water project engineering, planning and design. Funds are made available through loans, grants, bonds, and a revolving development account.

- *National Conservation Buffer Initiative, NRCS*
  The National Conservation Buffer Initiative program provides cost-share funds in an effort to use grasses and trees as conservation buffers to protect and enhance riparian resources on farms. This program will be an integral part o TMDL/WRAS implementation planning to ensure land management practices are moved away from streams and riparian areas.

- *Planning Assistance, CoE*
  Section 22 of the Water Resources Development Act of 1974 authorizes the Corp of Engineers to assist local governments and agencies, including Indian Tribes, in preparing comprehensive plans for the development,

utilization and conservation of water and related resources. Total costs for projects cannot exceed $1 million in a single year and are cost-shared at a 50% federal and 50% non-federal rate.

- *Range Improvement Fund - 8100, BLM*
  This program focuses on improving rangeland management conditions, including the implementation of best management practices. A portion of the money to operate the program comes from the grazing fees paid b permittees.

- *Small Watersheds* (PL-566), *NRCS*
  The Small Watersheds program authorizes the NRCS to cooperate in planning and implementing efforts to improve soil and water conservation. The program provides for technical and financial assistance for water qualit improvement projects, upstream flood control projects, and water conservation projects.

- *Partners for Wildlife (Partners), USFWS*
  The Partners for Wildlife program is implemented by the U.S. Fish and Wildlife Service and designed to restore and enhance fish and wildlife habitat on private lands through public/private partnerships. Emphasis is on restoration of riparian areas, wetlands, and native plant communities.

- *Pheasants Forever*
  Pheasants Forever can provide up to 100 percent cost-share for pheasant and other upland game projects which establish, maintain, or enhance wildlife habitat.

- *Resource Conservation and Development (RC&D), NRCS*
  Through locally sponsored areas, the RC&D program assists communities with economic opportunities through the wise use and development of natural resources by providing technical and financial assistance. Program assistance is available to address problems including water management for conservation, utilization and quality, and water quality through the control of nonpoint source pollution.

- *Resource Conservation and Rangeland Development Program (RCRDP), SCC*
  The RCRDP program provides grants for the improvement of rangeland and riparian areas, and loans for the development and implementation of conservation improvements.

- *Source Water Assessment Program (SWAP), IDEQ*
  The Safe Drinking Water Act Amendments of 1996 require states to develop and implement the Source Water Assessments Program (IDEQ, 1999c). A source water assessment includes delineation of source water areas, inventories of potential contamination sources, determinations of public health risks to contamination, and informing the public of the results. The primary goal of Idaho's SWAP is to develop information which enables PWS owners, consumers, and others to initiate and/or promote preventative actions to protect their drinking water sources.

  The actual source water assessment is not an end product. Instead, it is a first step in providing a sound technical basis for the local public water supply system to consider protection measures appropriate for their particular situation. Information derived from the many source water assessments is intended to be used by other individual environmental programs, both regulatory and non-regulatory, for development and implementation purposes. For example, use of contaminant source inventories to assist in Class V injection well prioritizations. Another example may be for use of the Clean Lakes funding and process to identify and prevent/mediate NPS impacts to surface water supply sources.

  The IDEQ is committed to providing leadership to help communities develop and implement protection activities. However, the ultimate goal of protection can be achieved only through local initiatives. The direction and strategies are driven at the local level based on the results of each assessment. IDEQ's vision is to provide technical assistance to those communities and public water supply systems (PWS) with high susceptibility, and to maximize the use of assessment results by assisting PWS and communities in implementing protection strategies at the local

level. Assessment results are helpful in determining strategies and degrees of application for protecting and preventing impacts to source waters.

Source water protection involves a variety of measures taken to ensure the continuing quality of drinking water whether it is supplied by ground water or surface water. It is up to the water system and the public to decide what form of protective measures are appropriate. Some methods may be as simple as ensuring well integrity or managing activities in a manner that is protective of water quality. IDEQ will promote protection through technical assistance, training, and education through its wellhead protection and drinking water programs.

- *State Agricultural Water Quality Program (SAWQP), (1980-1999); Water Quality Cost-Share Program for Agriculture, SCC/ISDA*
  SAWQP was the primary state planning and implementation program from 1980 through 1999. The state replaced SAWQP in 1999 with a new agricultural water quality incentive program, under the direction of the SCC as the designated agency for agriculture and grazing, which focuses more directly on implementation of agricultural TMDL plans. Where appropriate, state and federal incentive programs are integrated through the scoping process in the planning phase to maximize nonpoint source water quality protection for agricultural activities (see Introduction-Historical and Chapter 2).

- *State Revolving Fund (SRF), IDEQ*
  The IDEQ Grant and Loan Program administers the State Revolving Fund. The purpose of the program is to provide a perpetually revolving source of low interest loans to municipalities for design and construction of sewage collection and treatment facilities to correct public health hazards or abate pollution. State Revolving Loan funds are also used to support the Source Water Assessment Program. The Grant and Loan Program uses a priority rating form to rank all projects primarily on the basis of public health, compliance, and affordability. Additional points are awarded to projects that have completed a source water assessment and are maintaining a protection area around their source.

  At this time, IDEQ is reviewing the SRF program for its ability to provide for an expanded role in addressing NPS pollution.

- *Stewardship Incentives Program (SIP), IDL*
  SIP provides technical and financial assistance to encourage non-industrial private landowners to keep their lands and natural resources productive and healthy. Qualifying land includes rural lands with existing tree cover or land suitable for growing trees. Eligible landowners must have an approved Forest Stewardship Plan and own less than 1,000 acres.

- *Storm Water Program, IDEQ*
  The Storm Water Program is primarily responsible for providing TMDL support, technical assistance and education to community and WAGs to protect both surface and ground water quality from the effects of urban nonpoint source pollution. The Storm Water Program serves a vital role in providing a multiple interface between both surface and ground water protection, as well as the "edge effect" caused by urbanization. The program goal is to encourage watershed-oriented solutions for managing runoff from existing and new site developments. The program provides technical assistance in characterizing community nonpoint source pollutant loads (existing and forecasted), prioritizing local monitoring for select sub-basins, and identifying appropriate load reduction strategies. The program currently works with cities located on §303(d) listed water bodies (urban watersheds) throughout the state. The scope of work includes a watershed approach for managing storm water runoff, and identification of sub-basins with the greatest potential risk of impacting water quality. The process encourages local, consensus-driven solutions through comprehensive planning and zoning techniques, retrofits, and demonstration projects. All of these activities are supported by program guidance (see Chapter 6.).

- *Swampbuster, NRCS*
  The Swampbuster program is designed to discourage the conversion of wetlands for agricultural crop production. Under this provision, anyone planting crops on wetlands converted after December 23, 1985, is ineligible for most USDA farm program benefits.

- *Wellhead Protection Program, IDEQ*
  Wellhead Protection is a community-based approach to protecting ground water used as drinking water. Idaho has an EPA approved wellhead protection program. The Wellhead Protection Program is voluntary and stresses common sense methods for preventing ground water contamination.

- *Wetlands Reserve Program (WRP), NRCS*
  WRP was established to help landowners work toward the goal of "no net loss" of wetlands. This program provides landowners the opportunity to establish 30-year or permanent conservation easements, and cost-share agreements for landowners willing to provide wetlands restoration.

- *Wildlife Habitat Incentive Program (WHIP), NRCS*
  WHIP was established to help landowners improve habitat on private lands by providing cost-share monies for upland wildlife, wetland wildlife, endangered species, fisheries, and other wildlife. Additionally, cost share agreements developed under WHIP require a minimum 10 year contract.

Many of programs listed above have been specifically designed to provide the means necessary to implement best management practices, which when correctly maintained abate known nonpoint source water quality impairments. Additionally, programs such as the Idaho Storm Water Program, Wellhead Protection Program, and Source Water Assessment Program focus on preventing significant threats to water quality. Designated agencies and their partners using a mix of regulatory, voluntary, and incentive-based programs, target a given watershed, and in conjunction with the BAG/WAG process as outlined in Idaho's Water Quality Law, provides for the abatement and prevention o nonpoint source pollution in a complementary holistic fashion.

CHAPTER 5 - ADDRESSING IMPACTED AND THREATENED WATERS

Key element #5 states that *"the state program identifies waters and watersheds impaired or threatened by nonpoint source pollution and a process to progressively address these waters."*

State, tribal, and federal agencies use multiple processes to assess water quality and other natural resource conditions. The State of Idaho, in cooperation with many agencies, tribes, and interest groups throughout the state, monitor water quality and identify waters and watersheds not meeting water quality standards through various means:

- Under CWA §303 (d), the IDEQ assembles and evaluates existing and readily available water quality-related data and information to compile the 303(d) list (see Figure 1.2). Much of the data derived from monitoring and other water quality information is related to the Beneficial Use Reconnaissance Project (BURP) (IDEQ, 1998a,b,c). The 1998 303(d) list includes: all "threatened" waters and those water bodies assessed and found to be in full support throughout the State. This list represents a comprehensive status of water quality in Idaho.

- Under the June 1998 USDA/EPA Unified Watershed Assessment Framework, Idaho categorized it's watersheds around the state at the subbasin scale (UAW, Appendix A-7).

- Under CWA §305 (b), the IDEQ collects water quality information and reports on conditions o waters every two years.

- Under CWA §314, many agencies and entities conducted lake assessments and implemented lake protection plans statewide. The corresponding information and reports generated have been integrated into water body assessments, priority setting and implementation processes statewide.

- Under CWA §319, the IDEQ works cooperatively with other state, tribal, and federal agencies to develop, integrate, implement and monitor the effectiveness of the State Nonpoint Source Management Program and associated implementation projects.

- In addition to §319, multiple entities monitor water quality in association with ongoing implementation projects such as SAWQP, or for TMDL/WRAS activities through WAGs, such as the ISDA agricultural TMDL water quality monitoring program jointly conducted with the SCC, SCDs, and IASCD (Appendix E, Objective #6).

- Conducting assessments of public drinking water sources as required under the Safe Drinking Water Act. These assessments will serve to inform the public and as a basis for future actions of local source water protection.

- Developing any projected priority systems for clean water and drinking water state revolving loan funding (SRF).

Threatened waters are not specifically defined in the Idaho *Water Quality Standards and Wastewater Treatment Requirements* or in the 1996 EPA guidance titled *Nonpoint Source Program and Grants Guidance for Fiscal Year 1997 and Future Years.* Idaho, in reviewing waterbody conditions, determines if: a) the waterbody is supporting its designated beneficial use, b) is not supporting its designated beneficial use, or c) further evaluation or data is needed to make a scientific determination of the use support. However, in 1993 EPA defined a threatened water as "*those waters that fully support their designated use but may not fully support uses in the future (unless pollution control action is taken) because of anticipated sources or adverse pollution trends*." The State of Idaho's draft 1998 §303(d) report includes approximately 670 miles of water identified by the EPA in 1994 as being threatened. The EPA §305(b) guidance furthermore indicates that threatened waters should be based on actual monitoring or evaluation data that indicate an apparent declining water quality trend (i.e., water quality conditions have

deteriorated, compared to earlier assessments, but the waters still support uses). The state of Idaho uses the methods described in the remainder of the chapter to achieve this goal.

Surface Water

Since 1990, IDEQ has operated a 63 site statewide monitoring network to gather trend data on the six major river basins and other sites. The majority of these sites are on listed water bodies or within watersheds scheduled for the development of a TMDL and provide long-term trend data on the potential improvements in Idaho's water quality through the application of BMPs. Data is collected by the U.S.G.S. on these sites either annually, biennially, or triennially. In addition to the 63 site network, IDEQ uses the Beneficial Use Reconnaissance Project (BURP) process to collect required monitoring data on surface waters of the state. The BURP work plans (IDEQ 1998a, 1998b, 1998c) are broken up into a lake and reservoir section, wadable stream section, and a rivers section. The various BURP workplans outline the following objectives for the program:

- Document the existing beneficial uses of water bodies to the extent possible at the reconnaissance level-intensity;
- Determine if reconnaissance-level protocols are feasible, applicable, and usable;
- Sample potential reference conditions/streams;
- Gain better BURP coverage in hydrologic units with upcoming subbasin assessments and TMDLs; and
- Collect data to assist in the determination of beneficial-use support status.

The BURP and similar data collected by various agencies is entered into a database for analysis (see Figure 1.2). The analysis process follows a step wise approach to determine if: a) a water body is supporting its beneficial use; b) a water body is not supporting its beneficial uses; or c) requires further data to evaluate the beneficial use status. The process can be used to prioritize water bodies for more stringent assessments and identify candidate beneficial uses. The process provides a consistent and statewide water body assessment method which identifies impaired or threatened water bodies. The BURP and *Water Body Assessment Guidance, A Stream to Standards Process*" (IDHW, 1997b) are relativel new processes and sufficient data may not be available to make the necessary trend determinations on those waters presently meeting their designated beneficial uses.

The information developed by this assessment process is used to identify problems areas, then prioritize and target those problem areas on a watershed-by-watershed basis for prevention/restoration activities. Idaho proposed an 8 year schedule for the development of TMDLs which was approved in U.S. District Court on April 9, 1997. This approved schedule is consistent with EPA's Healthy Watershed Strategy which states that a key component is "*to rapidly increase development and implementation of total maximum daily loads to manage water quality on a watershed scale*." To implement provisions of the schedule will take all available federal, state, and local program authorities including non-regulatory, regulatory, or incentive-based programs authorized by federal, state or local law. Additionally, the State o Idaho may require that additional partnerships be developed with EPA and the other federal land management agencies for addressing TMDL/WRAS development and implementation on federal lands. To meet this need IDEQ may develop new partnerships with other natural resource entities to enhance overall efforts for the voluntary implementation o BMPs in watersheds impacted by nonpoint source pollution regardless of the beneficial use support status.

Other regional monitoring efforts such as the BOR SR[3] project, IDWR River Basin Studies and efforts through man other agencies, including WAGs, integrate data to characterize watersheds, compile water quality and quantity data, and identify data gaps for needed additional information. This monitoring is done primarily to support TMDL/WRAS planning and targeting of implementation efforts. Further defining of pollutant sources is done locally by IDEQ regional offices in cooperation with Tribes, IF&G, BOR, ISDA, SCC, IASCD and WAGs as appropriate. Many watershed projects funded through §314, §319, EQIP, PL566 and SAWQP had baseline and continuing long term monitoring to assess changing watershed characteristics and BMP effectiveness.

At a minimum, the State is required to update its §319 nonpoint source management program and plan every five years. Every two years, IDEQ prepares an updated §305(b) Water Quality Status Report and a 303(d) list as required by the CWA. The §305(b) status report summarizes the status of Idaho's waters and includes a list of impaired and threatened

waters . The 303(d) list contains waters listed as impaired water quality segments, threatened waters, and water bodies that have been de-listed (Table 5.1). Additionally, the 303(d) list identifies water bodies that have been assessed and found to be in full support (Table 5.2). The current 1998 303(d) list is also divided into subparts and identified by each specific pollutant type (Table 5.3) and is further categorized, according to the Idaho UWA priorities (Appendix A-7).

Table 5.1 Summary of the 1998 303(d) List [Source: the 1998 305(b) Report].

	# Segments	# Miles*
1994 (1996) List	962	10,646
1998 List Carryover from 1994 (1996) New Segments Delistings	 List 112 390	 7,262 983 3,388
Threatened		669

* Rounded to the nearest whole mile.

Table 5.2 Summary of Fully Supporting, Threatened, and Impaired Assessment.*

Degree of Use Support	Assessment Category		Total Assessed Size
	Evaluated	Monitored	
Size Fully Supporting All Assessed Uses		3,384	3,384
Size Fully Supporting All Assessed Uses but Threatened for at Least One Use	669		669
Size Impaired for One or More Uses		8,227	8,227
Size Not Attainable for Any Use and Not Included in the Line Items Above			N/A
TOTAL ASSESSED		11,611	11,611

* Reported in miles [Source: State of Idaho 1998 303(d) List].

Table 5.3 Summary of pollutants/contaminants on the 1998 303(d) List [Source: the 1998 305(b) Report].

Pollutants/Contaminants on 303(d) List	Listed Water Bodies (Rivers, Streams, and Creeks)
Bacteria	127
Channel stabilit	2
Dissolved oxygen	101
Flow alteration	159
Habitat alteration	113
Mercury	3
Metals (unspecified)	43
Ammonia	26
Nutrients (unspecified)	214
Oil or grease	15
Organics (unspecified)	7
Pesticides (unspecified)	12
pH	22
Salinit	1
Sediment	573
Dissolved gas	6
Temperature	145
Unknown	109

Federal law requires that the waterbodies on the §303(d) list be prioritized. The higher up on the list a water body is after prioritization, the more urgent it is for the development of a TMDL. To the extent that public agencies are limited in their ability to address waterbodies on the §303(d) list, they will generally focus their limited resources first on the higher priority waterbodies. Public participation is a major element of the IDEQ TMDL Program and is incorporated throughout the BAG/WAG process, as required by Idaho Code §39-3601 *et seq*. These advisory groups make recommendations to the IDEQ on water quality monitoring, water quality standards revisions, §303(d) listings, TMD development, TMDL implementation, and other watershed priorities.

Each watershed will have a unique set of interested and affected persons with a stake in developing and implementing a TMDL. The public must be involved in all steps of TMDL development, but are most heavily involved in implementation. Ideally, those who will be most closely involved in implementation should be involved in development of the implementation plan. The point is to seek as much public and private support for the implementation plan as possible in order to maximize its likelihood of success. Interested stakeholders may include local land owners, other residents of the watershed, local governments, special districts, state and federal agencies, natural resource stewardship groups with local interests, and others.

The implementation plan identifies the targeted pollutants and their sources, describes the specific pollution controls or management measures to be undertaken, the mechanisms by which the selected pollution control and management measures will be put into action, and describes the authorities, regulations, permits, contracts, commitments, or other evidence sufficient to ensure that implementation will take place. The plan also describes when implementation will take place, identifies when various tasks or action items will begin and end, when mid-term and final objectives will be met, and establishes dates for meeting water quality targets.

Application of effective BMPs is crucial to achieving the pollutant load reductions and targets of a TMDL. Consequently, the implementation plan, to the extent practicable, must be explicit about which BMPs or systems o BMPs will be employed to achieve the targets, where and when the BMPs will be employed, and how application of the BMPs will achieve the stated targets. EPA guidance specifically identifies several criteria by which BMPs will be judged:

- A data-based analysis showing that the selected BMPs have been demonstrated to be effective in addressing the issue or pollutant in question (i.e., a history of successful application in similar situations);
- An explanation of the mechanisms by which application of the BMPs will be assured; and
- A plan for tracking the implementation and effectiveness of the BMPs.

The IDEQ and the other designated natural resource agencies will use these criteria in evaluating the likelihood that selected BMPs will achieve the targets and load reductions specified in the TMDL. The selection of BMPs may be ver site-specific, and may change over time in response to changing conditions, opportunities, land manager preferences, and lessons learned. To the extent that BMPs can be anticipated to change over time, the TMDL implementation plan must describe the decision making process by which future BMPs will be selected, how effectiveness monitoring and other inputs will factor into the selection, and how interested stakeholders will be involved in the decisions. Effective TMDL implementation plans generally are designed to be flexible and adaptable over time.

Monitoring for implementation and effectiveness of the TMDL should be guided by the targets and load allocations o the TMDL and should track implementation of the selected pollution control measures, collect and analyze information on the effectiveness of the specific measures at achieving the water quality goals, and provide a "feedback" or an adaptive management process. The types of monitoring which may be needed include chemical, biological, and physical parameters depending on the watershed in question. The watershed advisory group implementing the TMDL will be working closely with the designated agencies to ensure that monitoring efforts within the watershed are not duplicated. Certain agencies, such as IDEQ, have inherent monitoring responsibilities (e.g., the IDEQ Beneficial Use Reconnaissance Project).

Effectiveness monitoring should evaluate the results of implementing various management approaches and document long range water quality improvements and beneficial use support trends. EPA guidance defines an adequate monitoring plan as tracking:

- Implementation of BMPs;
- Water quality improvements; and
- Progress toward meeting water quality standards.

In a phased TMDL, adequate monitoring also provides specific data needed to refine and improve initial loading capacity and allocations.

A high degree of commitment to ongoing monitoring of project effectiveness is an important element of the implementation plan. IDEQ's Beneficial Use Reconnaissance Project systematically reviews the beneficial use status o Idaho's water ways. This along with, pre and post watershed implementation monitoring by IDEQ and others, and site specific BMP effectiveness data collected by the designated agencies as listed in Idaho Code §39-3601 et seq. for each NPS category will substantially cover the implementation monitoring needs of the state (See Chapter 4 Monitoring and Evaluation).

The use of monitoring results in a well thought out feedback loop process is important in evaluating the effectiveness o actions and improving upon TMDLs and implementation plans. Dates for interim program review must be built into the implementation timetable. Similarly, the monitoring plan must include at least a brief discussion of how and by whom the collected data will be analyzed and how the results will be used to make and incorporate revisions in the TMDL.

Ground Water

The Idaho Nonpoint Source Management Program provides consistency on statewide nonpoint source priorities among all its interagency partners at the various federal, state, and local levels. The Program also provides consistency with respect to implementation, which is predominantly initiated through local watershed planning and TMDL/ WRAS implementation. On the other hand, ground water implementation will most likely be initiated from completed source water assessments. Source water protection involves a variety of measures taken to ensure the continuing quality o drinking water, whether it is supplied by ground water or surface water. Information derived from source water assessments will be used by other environmental programs, both in a regulatory and non-regulatory sense, to develop and implement their program plan goals and objectives.

Aquifers or portions of aquifers impaired or threatened by point and nonpoint sources of pollution are identified primarily through Idaho's ground water quality monitoring program. This program, which is described within the *Idaho Ground Water Quality Plan* (Ground Water Quality Council, 1996), consists of statewide, regional and local monitoring.

Idaho maintains a statistically-designed ground water quality monitoring network consisting of more than 1,500 wells o all types for which the three most common are domestic (67%), irrigation (20%), and public water systems (7%). The network was designed using stratified random site selection to satisfy the sampling program's first objective, to characterize the (ambient) water quality of the state's aquifers. The network is stratified by hydrogeologic subareas, which represent geologically similar areas and generally encompass one or more of the major ground water flow systems identified within the State. Each flow system includes at least one major aquifer, with some systems being comprised o several aquifers which may be interconnected. Tables B-1 through B-20 of Appendix B (IDEQ, 1998e) present ground water quality sampling results for 20 of the 22 subareas.

The goals of statewide monitoring are to characterize major aquifers and identify trends in ground water quality. This is accomplished through the statistically-designed Statewide Monitoring Network, which is comprised of over 1,500 sample locations. Of those approximately 400 different locations are sampled annually, so that all sites are sampled at least once every four years. There is also a subset of about 100 locations sampled on a yearly basis. Primary sample parameters include nutrients, major ions, trace elements, volatile organic compounds, field parameters, Radionuclides, and pesticides.

Idaho's 1998 305(b) report identified the ten highest priority sources of ground water contamination as well as other high priority sources (Table 5.4). The ten highest priority sources of ground water contamination in Idaho, listed in no particular order, were determined to be animal feedlots, fertilizer applications (including land application of manure), pesticide applications, land application (of wastewater, sludge, etc.), underground storage tanks, waste tailings, landfills, septic systems, shallow injection wells/urban runoff, and industrial facilities.

Other high priority sources of ground water contamination in Idaho, listed in no particular order, include agricultural chemical facilities, agricultural drainage wells, above ground storage tanks, surface impoundments, waste piles, deep injection wells, mining and mine drainage, and spills (including spills relating to on-farm agricultural mixing and loading procedures. These numerous ground water contamination sources need to be addressed through protection related activities and programs.

Table 5.5 developed for Idaho's 1998 305(b) report, summarizes some of the existing and potential contamination sites found throughout the State. It is important to note that not all existing and potential sources of contamination are included in Table 5.5. Current efforts associated with Idaho's Source Water Assessment Program are expected to significantly improve available information pertaining to the numbers and locations of contamination sites throughout the State. That information will be used for future 305(b) reporting.

Regional and local monitoring are generally addressed together. Regional and local monitoring is used to investigate ground water contamination that is known or suspected to exist. Several state and federal agencies are or have been involved with regional and local monitoring. To ensure that regional and local monitoring is pursued in a coordinated manner as envisioned within the Idaho Ground Water Quality Plan, the Idaho Ground Water Monitoring Technical Committee (GWMTC) was formed. The GWMTC is chaired by IDEQ and comprised of 12 state and federal agencies and a university representative.

One of the key committee objectives is to identify and prioritize regional and local monitoring needs based on existing ground water quality, vulnerability, and beneficial uses. As part of this effort, aquifers or portions of aquifers which are impaired or threatened are identified and prioritized based on criteria developed through the GWMTC. These prioritized monitoring needs are displayed on a GIS system along with a corresponding database used for tracking purposes. Monitoring can be pursued in the areas of greatest need to determine the extent of the contamination, potential impacts from the contamination, and causes of the contamination. For example, as the major participant in this effort for agriculture, ISDA is implementing the Agricultural Ground Water Quality Protection Program for Idaho. ISDA also is implementing an agricultural ground water quality regional and local monitoring program related to pesticides and nutrients, as well as monitoring the impacts to ground water from dairy operations (see Chapter 2, Agency Key Roles).

To date, five years of statewide monitoring data and data from several regional and local monitoring projects have been prioritized to determine additional monitoring needs. Prioritization will continue to incorporate these data sources and will use vulnerability information where data may not be available.

Table 5.4 Major sources of ground water contamination in Idaho [Source: 1998 305(b) report].

Contaminant Source	Ten Highest Priority Sources	Other High Priority Sources	Factors Considered in Selecting Contaminant Sources	Contaminants
Agricultural Activities				
Agricultural chemical facilities		(√)	A, B, C, D, E, F	A, B, D, E
Animal feedlots	(√)		A, B, C, D, E, F	E, G, J, K, L
Drainage wells		(√)	A, B, C, D, E, F	A, B, C, E, J, L
Fertilizer applications	(√)		A, B, C, D, E, F, G	E
Irrigation practices				
Pesticide applications	(√)		A, B, C, D, E, F, G	A, B, C, D
Storage and Treatment Activities				
Land application	(√)		A, B, C, D, E, F	E, G, H, J, M (organics)
Material stockpiles				
Storage tanks (above ground)		(√)	A, B, C, D, E, F	A, B, C, D, H
Storage tanks (underground)	(√)		A, B, C, D, E, F	B, C, D, H
Surface impoundments		(√)	C, D	F, G, H, I
Waste piles		(√)	A, E, F	F, H, I
Waste tailings	(√)		A, B, D, E, F	H, M (pH)
Disposal Activities				
Deep injection wells		(√)	A, B, C, D, E, F	B, C, E, J, L
Landfills	(√)		A, B, C, D, E, F	B, C, D, E, H, J, L, M (VOCs, IOCs)
Septic systems	(√)		A, B, C, D, E, F	E, J, L,
Shallow injection wells/Urban Runoff	(√)		A, B, C, D, E, F	A, B, C, D, E, G, H, J, L
Other				
Hazardous waste generators				
Hazardous waste sites				
Industrial facilities	(√)		A, B, D, E, F	C, D, G, H, M (creosote)
Material transfer operations				
Mining and mine drainage		(√)	A, D, E	H, M (cyanide compounds)
Pipelines and sewer lines				
Spills		(√)	A, C, E, F	A, B, C, D, I, M (fertilizer)
Transportation of Materials				

Factors used to select contaminant sources:
A. Human health and/or environmental risk (toxicity); B. Size of the population at risk
C. Location of the sources relative to drinking water sources D. Number and/or size of contaminant sources
E. Hydrogeologic sensitivit F. State findings, other findings
G. Applies to both dryland and irrigated agriculture

Contaminants/classes of contaminants associated with each of the sources that were checked:
A. Inorganic pesticides B. Organic pesticides C. Halogenated solvents D. Petroleum compounds
E. Nitrate F. Fluoride G. Salinity/brine H. Metals
I. Radionuclides J. Bacteria K. Protozoa L. Viruses M. Other

** Information is based on professional judgement and input from each of the six Idaho Division of Environmental Quality Regional Offices, the Idaho Department of Water Resources, and the Idaho Department of Agriculture.*

Table 5.5 Statewide summary of existing & potential ground water contamination sites [Source: 1998 305(b) report].

Source Type	Number of Sites	Number of Sites with Confirmed Ground Water Contamination	Typical Contaminants Which Have Been Detected or May Exist
CERCLA sites (includes Department of Defense and Department of Energy sites)	8	7	Metals, VOC
Leaking Underground Storage Tank Sites	992	269	Petroleum Compounds
Underground Storage Tank Sites (no releases found)	2210	0	Petroleum Compounds
RCRA Corrective Action & Misc. Cleanup Sites	8	7	VOCs, Pesticides, Oil, Creosote
Wastewater Land Application Permitted Sites	116	24 (a)	Total Dissolved Solids, Chloride, Iron, Manganese, Nitrate
Ore Processing by Cyanidation Permitted Sites	11	2	Cyanide, Nitrate, Diesel
Septic Systems	190,000	data not available	Nitrate, Bacteria
Class V Underground Injection Wells (excluding septic systems)	>5000	data not available	Bacteria, Nitrate, Pesticide
Historical Landfills	1022	data not available	Metals, VOCs, Oil
Confined Animal Feed Operations (NPDES permitted)	63	data not available	Nitrate, Bacteria
Other Ground Water Contamination Locations (not covered above) (b)	28	19	VOCs, Nitrate, Bacteria, Pesticides, Metal

Notes:
(a) Some contaminated sites are associated with secondary MCLs such as Total Dissolved Solids.
(b) Includes voluntary remediation sites and other significant areas of contamination.

Information obtained through the regional and local monitoring projects is used to determine the appropriate measures needed to protect the resource. These measures, which typically would involve the application of BMPs, are applied in a manner consistent with the *Idaho Ground Water Quality Plan* and "Ground Water Quality Rule." This approach would generally involve the application of a BMP feedback loop for nonpoint source contaminants.

Source Water Assessment and Protection

The 1996 Amendments to the Safe Drinking Water Act requires states to establish and implement a Source Water Assessment Program (SWAP) Plan. A consistent theme in the new amendment is the empowerment of states with new flexibility and resources to tailor programs to their individual needs and conditions. This empowerment carries with it the obligation to solicit extensive public involvement and provide public information with special emphasis on prevention based efforts to ensure that states' choices respond to their constituents' needs and conditions.

In conjunction with this nation-wide effort, the primary goal of Idaho's SWAP is to develop information which enables PWS owners, consumers, and others to initiate and/or promote actions to protect their drinking water sources. Drinking water sources have been impacted by a variety of different water quality parameters (Table 5.6). The actual source water assessment is not an end product. Instead, it is a first step in providing a sound technical basis for the local public water supply system to consider protection measures appropriate for its particular situation. The long range goal of Idaho's SWAP is drinking water protection, not simply source water assessment.

There are three types of information and GIS products which will be available for distribution to the public. These include:

- Base data and GIS coverages used in the source water assessment process;
- Comprehensive statewide GIS coverages produced from the assessment process; and
- Final source water assessment report and map products.

A limited amount of data will be made available to the public via the IDEQ website. The scope of the information made available will include reports associated with specific assessments and may include the ability to view source water assessment map products. All information related to source water assessments will be archived in digital format at IDEQ. For each PWS, a completed source water assessment will be provided in a report package. The package will include a fact sheet that introduces the purpose of the source water assessment, a narrative of the results, and one or more supporting maps illustrating the delineated source water assessment area along with locations of potential contaminant sources in the form of a list.

The IDEQ is committed to providing leadership to help communities develop and implement source water protection activities through the IDEQ Wellhead Protection Program and partnership with the Idaho Rural Water Association. However, the ultimate goal of protection can only be achieved through local initiatives. The direction and strategies are driven at the local level based on the results of each assessment. IDEQ's vision is to provide technical assistance to those communities and PWSs with high susceptibility, and to maximize the use of assessment results by assisting PWSs and communities in implementing protection strategies. Assessment results are helpful in determining strategies and degrees of application for protecting and preventing impacts to source waters.

By implementing the programs identified in this chapter, Idaho will be able to make the necessary determinations to identify waters and watersheds which are impaired or threatened by NPS pollution. Once these waters have been identified, Idaho will build upon the state, federal, and local agency partnerships identified in Chapter Two and the programs identified in Chapter Four to progressively address these waters.

Table 5.6 Total number of locations exceeding an MCL for a specific water quality parameter; all subareas combined (1996 & 1997 data).

Water Quality Parameter	Number (& %) of Statewide Monitoring Network Locations Exceeding the MCL Value	Number of Public Water System Locations Exceeding the MCL Value (a)
Nitrate	23 (3.3%)	32
Fecal Coliform (b)	20 (2.8%)	Data not calculated for this report
Tetrachloroethylene (also known a Perchloroethylene, Perc, or PCE)	0	4
Trichloroethylene (also known a Trichloroethene or TCE)	3 (0.4%)	2
Dichloroethene	0	2
Ethylene Dibromide (EDB)	1 (0.1%)	0
Di(2-ethylhexyl)phtalate (c)	0	1
Cadmium	3 (0.4%)	1
Barium	0	1
Antimo	0	1
Selenium (d)	1 (0.1%)	1
Arsenic (d)	7 (1.0%)	5
Fluoride (d)	7 (1.0%)	7

NOTES Table 5.6 provides a summary of all constituents where a primary MCL (or state ground water standard) is exceeded [Source: 1998 305(b) Report]. This summary combines all subarea information throughout the State, and shows that nitrate, coliform, fluoride, and arsenic are the more common water quality parameters exceeding an MCL when looking at both data sources.

(a) Percentages are not calculated due to varying numbers of parameter group samples and a bias toward sampling those locations with VOC detections. Data may also not be reflective of actual ground water quality since many public water systems use treatment or dilution to avoid exceeding an MCL.
(b) MCL is actually for total coliform, of which fecal coliform is a subset.
(c) Detection could be representative of system contamination versus contamination within the ground water in the vicinity of the well.
(d) Arsenic, fluoride and selenium elevated levels are assumed to be from natural background conditions unless determined otherwise.

CHAPTER 6 - NONPOINT SOURCE PROGRAM UPGRADES AND IMPLEMENTATION

Key element #6 states that *"The State reviews, upgrades, and implements all program components required by §319 of the CWA and establishes flexible, targeted, interactive approaches to achieve and maintain beneficial uses of waters as expeditiously as practicable."*

CWA §319 Requirements
The state of Idaho's Nonpoint Source Management Program plan should be viewed as an evolving planning document. This document will be reviewed once every five years to meet the minimum requirements of the CWA and changing state water quality needs. Specifically, §319 of the CWA outlines six specific factors that are to be included for an approved state nonpoint source management program plan. These items are discussed below:

- Identification of best management practices and measures;
  Best management practices and measures used for the prevention of nonpoint source pollution are identified in Chapter 6, Table 6.1.

- Identification of existing programs;
  The numerous programs in place within the State of Idaho for the control of nonpoint source pollution are discussed in Chapter 2.

- Develop a schedule containing annual milestones;
  A schedule containing annual milestones is described in Chapter 1.

- Certification by the state attorney general;
  The state attorney general's office in 1989, reviewed the CWA and the various Idaho statutes and regulations. Based on the Attorney General's review it was determined that the laws of the State of Idaho provide adequate authority for the IDEQ to implement the Nonpoint Source Management Program.

- Identification of federal and other sources of assistance;
  A description of federal and other financial resources other than those specified under §319 subsection (h) and (I) are described and included in Chapter 4

- Identification of federal programs for review.
  A description of federal consistency is identified in Chapter 7.

BMP Identification and Integration

One of the components included within Key Element #6 is the identification of BMPs.
BMPs are defined in the state water quality standards as *"practices, techniques or measures developed, or identified, by the designated agency and identified in the state water quality management plan which are determined to be the cost-effective, practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals."* A summary of BMPs by category can be found on Table 6.1.

With the exception of those programs where BMPs are required as part of the Idaho Water Quality Standards and Wastewater Treatment Requirements or by federal statute, the implementation of nonpoint sources BMPs within Idaho are voluntary. In Idaho the selection of appropriate BMPs is the responsibility of the designated agency and the landowner affected by the voluntary implementation of the BMP. Until Congress revises the CWA to regulate the release of all nonpoint source pollutants, the final selection of voluntary BMPs will be made by the landowner with due consideration of the economic, social, and water quality impacts.

However the State, as outlined throughout this document, has historically taken, and is taking a proactive approach to obtain enhanced prevention and protection to both surface and ground waters. Methods to assure probable adoption o

the NPS plan and obtain this enhanced prevention and protection leading to the meeting of State water quality standards, are included throughout this plan. Through the many agency roles and partnerships in Chapter 2, and the program linkages, as outlined in Chapter 4, the State continues to provide enhanced incentives and opportunities for participation. As well as continue its advancement of NPS pollution prevention and control.

Integration of the numerous State and Federal programs, along with the regulatory tie-ins afforded through this integration, allows the State to gain a much higher level of NPS treatment than would be attained by the individual program base level protection and control. As an example, this is evident in the many opportunities afforded to the States' programs by the revision and adoption of the NRCS 590 Nutrient Management Standard. This standard has been incorporated into the Dairy Initiative, Sole Source Protection Program, new Agriculture Water Quality Program, and is being considered for adoption into the new rule development for Swine and Poultry. This standard will become a valuable tool for all interagency programs working with irrigated agriculture, confined animal feeding operations and ground water protection.

As outlined in both the Introduction and Chapter 2, Idaho has many interagency State and Federal committees working together to enhance the effectiveness of all programs by evaluating the priorities, funding, consistency of BMPs used, participation, application methods, contracts, land coverage, and results of implementation. As TMDL/WRAS implementation activities increase, further coordination of State and Federal programs will be necessary to ensure adequate consistency between all land managers. Chapter 7 outlines those elements by which the State and Federal managers will be able to work together to enhance the States' water quality. Using the newly developed guidance documents referenced (*State Guidance for the Development of TMDLs, Draft Overview of the Implementation of NPS TMDLs* (Appendix C&D) and the *FS & BLM Protocol for Addressing CWA 303(d) Listed Waters*) will greatly help to focus and increase collaboration by all agencies to ensure meeting beneficial uses and water quality standards.

Idaho NPS Rules

The Rules Governing Nonpoint Source Activities (IDAPA 16.01.02.350), further provide a mechanism for achieving and maintaining beneficial uses of water should voluntary controls not prove successful. A nonpoint source activit conducted in accordance with applicable rules, regulations, and BMPs in a manner to demonstrate a knowledgeable and reasonable effort to minimize adverse water quality effect, are not subject to conditions or legal actions. However, the Director for the Department of Health and Welfare may:

- seek immediate injunctive relief to stop or prevent an activity determined to be an imminent or substantial danger to public health or the environment, if within a reasonable and timely manner approved BMPs are not evaluated or modified by the responsible agency, or if the control measures are not implemented by the operator; and;
- prepare a compliance schedule and/or institute administrative civil proceedings for nonpoint source activities that are inconsistent with approved BMPs;
- request that the responsible agency conduct a timely evaluation and modification of the approved BMPs to insure full protection of beneficial uses;
- review nonpoint source compliance plans to determine if: a) the proposed activity will comply with approved or specialized BMPs; b) a monitoring plan will provide information to the Director to determine the effectiveness of the approved or specialized BMPs; and c) the plan identifies a process for modifying the approved or site-specific BMPs.

Feedback Loop

The Idaho Water Quality Standards and Wastewater Treatment Requirements were revised in 1987 to address the feedback loop concept. The feedback loop (Figure 6.1) describes a process of nonpoint source pollution management

based on the implementation of BMPs. BMPs are identified through a planning process and applied by land managers or cooperators for site-specific conditions. Onsite effectiveness of the BMPs for restoring water or protecting water quality are evaluated through instream monitoring, well sampling, pollution transport monitoring, and other monitoring processes. The collected data is then evaluated against the appropriate criteria. BMPs are modified, until beneficial uses are restored and maintained.

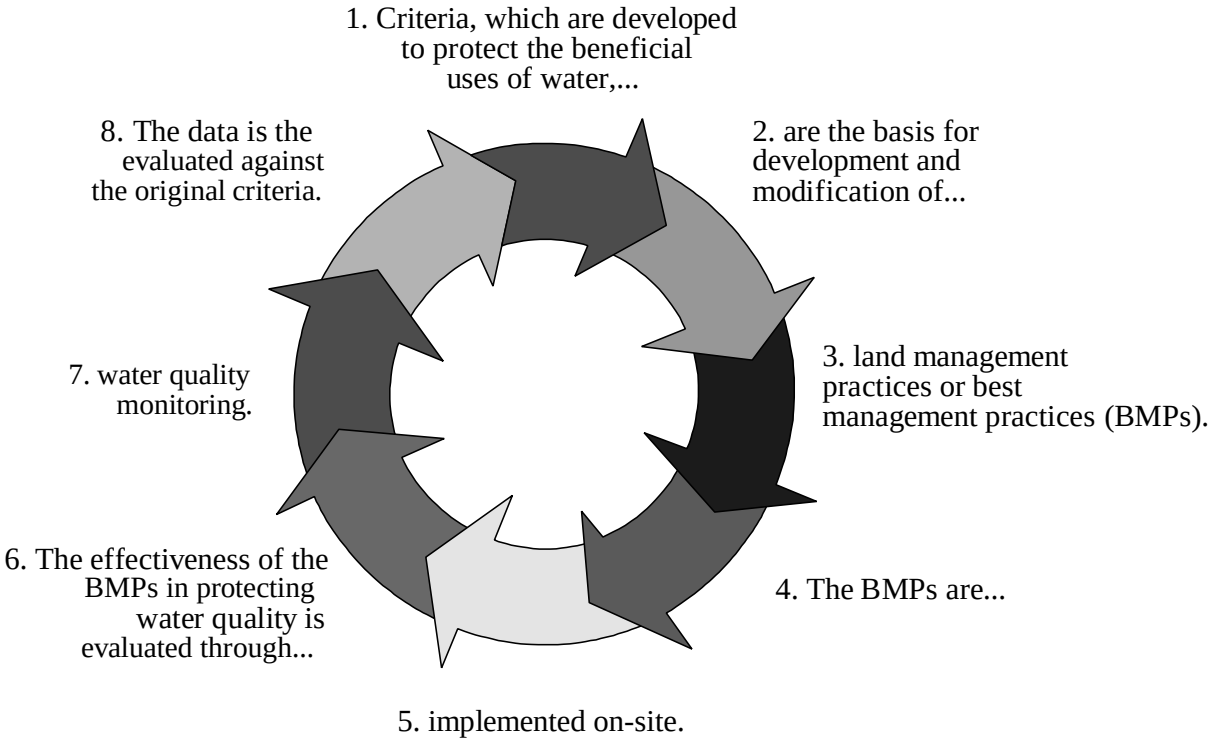

Figure 6.1 The State's feedback loop process.

The Water Quality Standards and Wastewater Treatment Requirements and the Ground Water Quality Rule provide the basis for reviewing and making surface and ground water programmatic recommendations.

State Revolving Fund (SRF)

Under Idaho Code Title 39, Chapter 36, monies from the state revolving fund are currently not eligible for use in the implementation of BMPs related to nonpoint source management projects. However, Idaho is reviewing these procedures to determine what legislation would have to be altered to utilize these funds for nonpoint source related projects. Should Idaho revise its state revolving fund to include nonpoint source management projects, a selection process would be developed to evaluate and rank all projects according to the specific need.

In light of TMDL/WRAS needs, several potential uses for the SRF have been identified for addressing NPS activities. A few examples may include:

- effluent trading activities. Idaho has many entities interested in pollution trading, who are currently working to pave the way for its use between municipalities and agricultural operators,

- Irrigation District use to provide funding for their shareholders for the updating of power delivery systems allowing conversion from flood to sprinkler systems,
- Sewer District use for subdivision conversion from septic to sewer systems,
- animal feeding facility upgrades,
- TMDL/WRAS implementation activites.
- various NPS control methods such as: wetland restoration, purchase of easements, riparian zone buffers, stormwater treatment and control, etc.

Idaho NPS Related Policies

The State of Idaho has developed a number of policies related to NPS pollution. These policies provide state environmental managers with the necessary guidance to deal with NPS pollution and a number of examples are listed below:

- PM 98-2, "Policy for No-Net Increase (TMDL)." This policy provides the State of Idaho with clarification on implementing IDAPA 16.01.02.054.04 and IDAPA 16.01.02.054.05 prior to the development and approval o a TMDL related to discharges of listed point and nonpoint source pollutants on waters which have been shown to not fully support their designated or existing beneficial uses.
- PM 98-3, "Ground Water Quality Protection From Storm Water Runoff." This policy provides for clarification for the Ground Water Quality Rule (IDAPA 16.01.11) implementation specific to the use of storm water management practices and methods for ground water protection.
- PM 98-4, "Wood and Mill Yard Debris." This policy temporarily adopted the "Wood and Mill Yard Debris Technical Guidance Manual" until such time that the manual is adopted by reference in the Solid Waste Management Rules and Standards.
- PM 97-1, "Water Quality and Wood Preservatives." This policy provides the public a concise document outlining BMPs for treated wood in an aquatic environment.
- SWF-1, "Idaho Solid Waste Facilities Guidance." This policy describes the use of shredded tires as an alternative daily cover material at municipal solid waste facilities, under the authority of the Idaho Solid Waste Facilities Act (§39-7401 et. seq.) and the Waste Tire Disposal Act (§39-6504).

Other Guidance

The State of Idaho has also developed a number of information series which can apply to NPS pollution. The informational series have been developed to demonstrate to local businesses and the public how their daily activities effect NPS pollution. Example documents include:

- The Idaho Recycling Directory (1998d);
- Pollution Prevention for Vehicle Maintenance (1995a);
- A Business Guide to Pollution Prevention (1995a);
- Estimating and Mitigating Phosphorus From Residential and Commercial Areas in Northern Idaho (1996);
- Catalog of Stormwater Best Management Practices for Idaho Cities and Counties (1997a);

- Environmental Planning Tool and Techniques: Linking Local Land Use to Water Quality Through Community-Based Decision Making (Urban Stormwater Runoff) (IDEQ, 1997b);
- Technical Guidance Manual for Individual and Subsurface Sewage Disposal (IDHW, 1997a);
- Idaho Home*A*Syst Project (1995); and
- IDEQ Informational Series 1 through 9.

  Information Series #1 - Idaho Risk-Based Corrective Action (RBCA), Cleanup Requirements for Petroleum releases;

  Information Series #2 - Petroleum Release Response and Corrective Action Requirements;

  Information Series #3 - Recommended Practices for Site Assessments During Closure of Underground Storage Tanks and Accidental Releases (Spills) of Petroleum Hydrocarbon Products;

  Information Series #4 - Permanent Tank Closure;

  Information Series #5 - Guidelines for Total Petroleum Hydrocarbon (TPH) Analysis of Petroleum Contaminated Soils;

  Information Series #6 - Protocol for Sampling and Analysis of Used Oil; and

  Information Series #7 - Procedures for Land Treatment of Petroleum Contaminated Soils.

  Information Series #8 - Unused Underground Heating Oil Tanks

  Information Series #9 - Recommendations for handling of sludge from UST closures.

Through the review and updating of this document once every five years Idaho maintains all programmatic requirements set forth under §319 (b) (1) State Management Programs. The feedback loop process will also continue to be implemented in such a way as to achieve and maintain the beneficial uses of water as expeditiously as possible. As needed, Idaho will also develop various policy guidelines and informational series to help mitigate the effects of NPS pollution. Practicable application of these tools occur through increased education and training by designated agencies. BAGs and WAGs are regularly targeted with outreach efforts, and they in turn target their participants and the public through SCD newsletters, TMDL workshops, monitoring, training, etc. to encourage participation, find solutions to the resource issues, and make use of the tools provided. However, should these processes fail to achieve and maintain the beneficial uses of water, the State of Idaho will use the mechanisms outlined in the Rule Governing Nonpoint Source Activities (IDAPA 16.01.02.350) to achieve and maintain those uses.

Table 6.1 List and Status of Best Management Practices

CATEGORY	RESPONSIBILITY	LOCATION	In Section 350 of the Water Quality Standards	
			Yes	No
Agriculture	IDEQ/SCC/ISDA	Agriculture Pollution Abatement Plan (APAP or Ag Plan) *		X
		Rules Governing Dairy Wastes	X	
		Idaho Waste Management Guidelines for Confined Feeding Operations		X
*The APAP is referenced in the Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 16.01.02.054), and section 054 stipulates that *"nothing in this section shall be interpreted as requiring best management practices for agricultural operations which are not adopted on a voluntary basis."* Sub-section 07 of the IDAPA 16.01.02.054 identifies that *"use of best management practices by agricultural activities is strongly encouraged in high, medium and low priority watersheds."* Sub-section 07 further indicates that *"the APAP is the source of best management practices for the control of nonpoint sources of pollution for agriculture."*				
Forest Practices	IDEQ/IDL	Idaho Forest Practices Rules	X	
Road Construction	ITD	Best Management Practices for Road Activities (Vol I&II)		X
		Catalog of Storm Water BMPs for Highway Construction and Maintenance		X
Urban Runo	IDEQ, IDWR, Local Government	Estimating & Mitigating Phosphorus from Residential and Commercial Areas in Northern Idaho		X
		Environmental Planning Tools and Techniques		X
		Catalog of Storm Water BMPs for Idaho Cities & Counties		X
Biosolids / Sludge	EPA/IDEQ	NPDES Permit		Can be found in section 650 of the standards.
Mining	IDL	Rules Governing Exploration and Surface Mining Operations in Idaho	X	
	IDL	Rules Governing Placer and Dredge Mining in Idaho	X	

CATEGORY	RESPONSIBILITY	LOCATION	In Section 350 of the Water Quality Standards	
			Yes	No
	IDEQ	Rules and Regulations for Ore Processing by Cyanidation		**X**
Mining	IDL	Best Management Practices for Mining in Idaho		**X**
Wastewater - Industrial Land Treatment	IDEQ	Land Application Permit Regulations		Can be found in section 600 of the Standards
		Guidelines for Land Application o Municipal and Industrial Waste Water		**X**
Landfills	IDEQ	Solid Waste Management Rules & Standards	**X**	
On-site Wastewater Systems	IDEQ	Rules for Individual Subsurface Sewage Disposal Systems	**X**	
	District Health Departments	Sewage Disposal Regulations		See IDAPA 41.04.01 41.03.01 41.04.02 41.04.03
Hydrologic / Habitat Modification	IDWR	Rules and Minimum Standards for Stream Channel Alterations	**X**	
Aquaculture	ISDA/IDEQ	The Idaho Waste Management Guidelines for Aquaculture		**X**
Well Drilling / Abandonment	IDWR	Administrative Rules for Well Construction and Abandonment		**X**

CHAPTER 7 - FEDERAL CONSISTENCY

Key Element #7 requires the "*identification of Federal lands and objectives which are not managed consistently with State program objectives*."

With the vast holding of federal lands in the State (Figure 7.1) the need for all land management agencies to coordinate their monitoring and remediation activities for nonpoint source pollution control remains a large and formidable task. The state's BURP, water body assessment protocol, and watershed approach incorporates federal and tribal lands use issues into both the BAG and WAG processes. This provides the opportunity to review federal land management and identify those lands which are not managed consistently with the state Nonpoint Source Management Program. Federal agencies routinely notify IDEQ regional offices of planned actions and send environmental assessments, management plans, and environmental impact statements to solicit state input on a wide range of environmental effects including water quality. Once a contributing source to nonpoint source pollution is identified each of the appropriate designated state agencies can work with the corresponding federal resource agency to develop the necessary adjustments to management plans to minimize pollution and protect, and/or restore beneficial uses.

Section 313 of the CWA states that "*each department, agency, or instrumentality of the Federal Government having jurisdiction over any property or facility, or engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions in a like manner as any nongovernmental entity.*" Additionally, Bob Perciasepe, EPA Assistant Administrator, emphasized in an August 1997 letter to EPA Regional Water Division Directors that " *Federal land management agencies have responsibilities to resolve nonpoint source problems on Federally owned and managed lands*." The letter goes on to state that "*Federal land management agencies with such responsibilities may establish a memorandum of understanding with the State water quality agency to accomplish implementation of nonpoint source controls necessary to meet water quality standards, and implement practices through Federal licenses and permits."*

In determining whether a federal agency has conducted its operations consistent with the Idaho Nonpoint Source Management Program, the specific agency should address the following series of questions. These questions apply to any federal, local or state agency conducting nonpoint source activities:

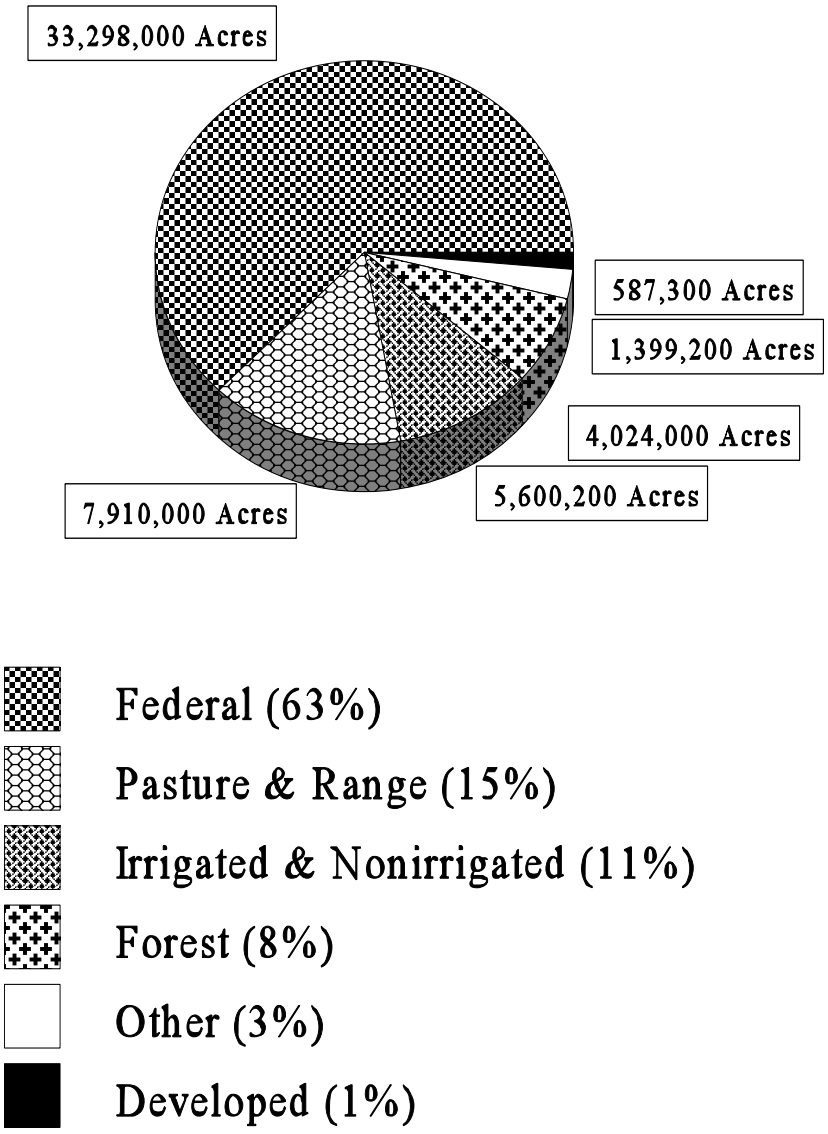

Figure 7.1 Land ownership in Idaho (Source 1992 Natural Resource Inventory Data).

- Was the appropriate regional office of IDEQ informed of the activity and steps to be taken to minimize nonpoint source pollution.
- Was a determination made if water quality limited (State of Idaho §303(d) list) stream segments exist within the project area
- Was a determination made if Outstanding Resource Waters (ORWs) exist within the project area
- Were the "appropriate beneficial uses" for the water bodies in the project area identified
- Were the water quality standards and criteria to protect the "appropriate beneficial uses" identified and are the being met
- Have the nonpoint source activities regulated by the Idaho Water Quality Standards been identified
- Were state approved BMPs for each nonpoint source activity identified
- For each nonpoint source activity that does not have approved BMPs, were management practices identified that demonstrate a knowledgeable and reasonable effort to minimize resulting water quality impacts
- Was a monitoring plan developed, and when implemented, did it provide adequate information to determine the effectiveness of the approved or specialized BMPS in protecting the beneficial uses
- Was a process (including feedback from water quality monitoring) identified for modifying the approved or specialized BMPs in order to protect beneficial uses of water identified
- Did pre-project planning and design include an analysis of water quality resulting from the implementation of the proposed activity sufficient to predict exceedences of water quality criteria for the beneficial use(s), or in the absence of such criteria, sufficient to predict the potential for beneficial use impairment

The State of Idaho entered into a memorandum of understanding in 1992 (Appendix A-1) with the participating federal land management agencies within Idaho specifying that each agency would incorporate these items into all planned activities. These items for achieving federal consistency are based on, and consistent with, the State of Idaho*Forest Practices Water Quality Management Plan* (IDEQ, 1988) and the ensuing antidegradation agreements which produced the *Coordinated Nonpoint Source Water Quality Monitoring Program For Idaho* (IDEQ, 1990). IDEQ will review the existing memorandum of understanding and modify it as necessary to ensure that all federal land management activities are consistent with the state's Nonpoint Source Management Program plan. However, with the vast holdings of federal lands within the state, IDEQ will rely on the internal policing of each federal land management agency and periodic program reviews (e.g., §401 certifications, Forestry Practices Act audits (FPA), etc.) to ensure that this provision of the nonpoint source management program plan is met.

The State of Idaho has developed: *Guidance for the Development of Total Maximum Daily Loads* (IDEQ, 1999a) and its companion Draft document *Overview of the Implementation of NPS TMDLs* (IDEQ, 1999b) (Appendices C& D). These documents call for the cooperation with federal agencies and the need for their assistance. In addition the April, 1999 *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act 303(d) Listed Waters*, outlines the process of how these federal agencies can work with the State to support State TMDL/WRAS requirements. The State will collaborate with these agencies statewide to ensure combined planning and implementation efforts eliminate as much duplication as possible to attain State water quality goals. Also on a watershed basis, IDL as the designated agency for silviculture, will help to integrate those TMDL/WRAS planning and implementation activities which will lay out those necessary actions or ongoing processes to ensure that overall watershed implementation will meet water quality standards and beneficial uses. Where such cooperative spirit breaks down, or proves inadequate, the state will request EPA assistance in resolving actions affecting water quality under the CWA.

To ensure consistency, the State may request EPA assistance to conduct educational and liaison activities and provide technical assistance to State and Federal agencies. If requested EPA may facilitate State-Federal negotiations and assist with mediation and conflict resolution. EPA may also work with IDEQ to support their pollution abatement and environmental protections efforts, and their efforts to ensure all federal programs and policies are compatible with the State's water quality standards and program implementation goals.

CHAPTER 8 - NONPOINT SOURCE PROGRAM MANAGEMENT

Key element #8 states that the nonpoint source program include an "*Efficient and effective management and implementation of the State's nonpoint source program, including necessary financial support*."

IDEQ provides for an efficient and effective NPS program by coordinating, defining the direction of, and leading NPS pollution prevention and control efforts throughout Idaho. The role of IDEQ is to lay out the state priorities and processes through the designated agencies, ensure that those agencies incorporate the state priorities and processes into their planning and implementation efforts, help those agencies to integrate those priorities through IDEQ liaisons to multiple state/federal committees and workgroups, through IDEQ Regional Office participation and facilitation of BAGs and WAGs, and other public outreach and training efforts. IDEQ helps to provide the linkages between setting the statewide priorities, and ensuring those priorities are evident in the various agency programs; by providing the tools as necessary, ensuring they are carried through to implementation, and by ensuring that the various agency efforts are effective in meeting water quality standards and beneficial uses.

Congress provides limited grant funds to those states with approved Nonpoint Source Management Programs. Idaho is eligible for these monies and makes them available to various local, county, tribal and state governments as well as nonprofit organizations, special interest groups, universities, etc., for the implementation of the State's Nonpoint Source Management Program. Proposals can be based on water quality limited water bodies from the State of Idaho approved §303(d) list, approved TMDLs, waters reported in the §305(b) report, waters of special concern (e.g., threatened and/or endangered species, sole source aquifer, etc.), or waters where beneficial uses are fully supported, but where documented nonpoint source pollution threatens future use.

Project Timing and Accounting

Nonpoint Source Management Program project development generally follows the EPA guidance and schedule listed in Appendix D of the "*Nonpoint Source Program and Grants Guidance For Fiscal Year 1997 and Future Years"* (EPA, 1996). In addition, the state has added elements to the schedule to include preliminary project reviews by the appropriate designated agency and prioritization by the appropriate BAGs. The State schedule (Appendix F-2) outlines the Nonpoint Source Management Program milestones.

As part of the 319 program requirements, the state utilizes the Grants Tracking and Reporting System by inputting the required elements into EPA's computer database. The state also produces an annual report to congress and a semi-annual report summarizing and highlighting the accomplishments of the program. In addition, the state uses a fiscal accounting system to track expenditures of both 319 funds and non-matching funds for projects within the program. These accounting procedures meet all required state and federal audit provisions.

Project Proposals

The IDEQ annually requests project proposals for the coming federal fiscal- year. Applications for proposed nonpoint source projects are narrative in nature and generally range from six (6) to twelve (12) pages in length. However, IDEQ has no minimum length or places no restriction on length of proposed projects.

Each applicant is provided with an application package that includes guidance from IDEQ and a list of water qualit project types, areas, or topics developed in cooperation between IDEQ and the BAGs. This list represents the priorities that IDEQ and/or the BAGs believe need to be addressed to restore or protect water quality throughout the state. The guidance documents which are provided to each applicant provide the applicant with the materials necessary to develop a comprehensive project and include such items as:

- application checklist;
- nonpoint source project summary and budget form;

- EPA required elements list;
- IDEQ program contact list;
- nonpoint source grant schedule; and
- IDEQ nonpoint source technical evaluation form.

In the proposed project, each applicant must specifically address a series of required elements. (Appendix F-3). These elements are necessary to facilitate the technical evaluation and ranking of the proposed projects (Appendix F-1). Sta from IDEQ and the other state designated agencies routinely work with applicants to develop projects and to ensure that proposed projects meet the state and federal project requirements.

Past funding cycles include a wide variety of projects. From 1990 through federal fiscal year 1999, Idaho has funded over 125 projects with the projects from 1997 through 1999 summarized in Tables 8.1 through 8.3.

Table 8.1 Nonpoint Source Projects for 1997

Project Title	**Description**
Nonpoint Source Progra Implementation	Provides for a IDEQ staff member to coordinate nonpoint source program and grant.
Idaho Storm Water Management	Develop statewide stormwater guidance for local communities.
Minidoka/Cassia Ground Water Monitoring	Provide funding for a national ground water monitoring and BMP demonstration project.
Environmental Solutions Class	Develop and implement high school science, math, and English curriculum related to water quality.
Thomas Fork Restoration	Stream bank restoration on the Thomas Fork of the Bear River.
Water Management and Apatite Binding of Heavy Metals	Treat mine tailings at the Rex Mill site in northern Idaho and restore ground water using an apatite filter.
Coeur d'Alene Tribes Sediment	Watershed and stream restoration throughout the Coeur d'Alene Indian Reservation.
Evaluation of Silvicultural Practices	Monitoring project through the University of Idaho to evaluate the effectiveness of forest BMPs prior to and after logging.
Paradise Creek Restoration	Urban stream restoration within the city of Moscow.
Ground Water Protection fro Urban Runoff	Development and implementation of urban stormwater runoff controls for the city of Boise.
PAM Demonstration	Area wide demonstration of the use of poly acrylamide (PAM) to reduce soil erosion.
Lower Boise Water Qualit Information and Education	Develop and implement an educational program targeting the citizens of the valley regarding the TMDL development for the Boise River.
Ada County Constructed Wetlands	Develop and implement a project to demonstrate the treatment capacity of constructed wetlands.

Project Title	Description
Cascade Reservoir Sediment Control	Implementation of constructed wetlands and erosion control BMPs associated with the Cascade Reservoir TMDL.
City of McCall Stormwater	Develop a management plan for treating stormwater runoff through the cit of McCall.

Table 8.2 Nonpoint Source Projects for 1998

Project Title	Description
Nonpoint Source Progra Implementation	Provides for a IDEQ staff member to coordinate nonpoint source program and grant.
Nonpoint Source Water Qualit Data Compilation	Provide funding to locate and acquire existing water quality data.
Nonpoint Source GIS	Provide funding to create GIS data layers associated with TMDLs
Environmental Indicators	Develop a set of environmental indicators associated with nonpoint source pollution.
Wellhead Protection Viabilit	Implement Idaho's Wellhead Protection Plan for four communities per year throughout the state.
Thomas Fork Restoration	Stream bank restoration on the Thomas Fork of the Bear River.
Preston Stormwater Runoff	Develop a stormwater runoff plan for the City of Preston.
Canyon Creek/Osborn Flats Tailings Removal	Remove and impound heavy metal contaminated sediment and restore stream system.
Paradise Creek Restoration	Urban stream restoration north of the City of Moscow.
Lemhi County Road Restoration	Implement a variety of road restoration activities throughout Lemhi County.
Cascade Watershed Restoration	Implementation BMPs associated with the Cascade Reservoir TMDL.
McCall Basin Stormwater	Implement approved BMPs to treat stormwater related runoff within the City of McCall.
McCall Marina Stormwater	Implement approved BMPs to improve stormwater drainage syste near the Big Payette Lake marina.
Sheridan Creek Restoration	Implement a series of irrigation BMPs to restore beneficial uses on Sheridan Creek.
Grazing Sediment Model	Develop a grazing sediment model for southern Idaho for use in TMD development.

Table 8.3 Nonpoint Source Projects For 1999

Project Title	Description
Nonpoint Source Progra Implementation	Provides for a IDEQ staff member to coordinate nonpoint source program and grant.
Source Water Assessment	Provides for the creation of a source water assessment GIS database necessary to implement IDEQ Source Water Assessment Program.
Pine Creek Mine Restoration	Remove and impound heavy metal contaminated sediment.
Cataldo Mine Dredge Site Restoration	Remove and impound heavy metal contaminated sediment and restore stream system.
Valley County Road Restoration	Implement a variety of road restoration activities throughout Valle County associated with the Cascade Reservoir TMDL.
Raft River Restoration	Implement area-wide BMPs for the Almo sub-watershed of the Raft River.
Lower Coeur d'Alene River Demonstration	Demonstration project of various stream bank restoration techniques and filter fabrics to remove heavy metals.
Coeur d'Alene Tribal Restoration	Implementation of various BMPs throughout the Coeur d'Alene Indian Reservation.
University of Idaho CAFO	Develop and implement a wetland project in association with the Paradise Creek TMDL to treat CAFO related runoff.
Thomas Fork Restoration	Stream bank restoration on the Thomas Fork of the Bear River.
ISDA Drain and Ground Water Monitoring	Ground water monitoring project to determine the nutrient loading to the Boise River.
DNA Finger Printing	Demonstration project to test bacterial DNA techniques on the Lower Boise River.
Vandenakker Ditch	Implement BMPs associated with the Vandenakker drain failure.

The projects listed in Tables 8.1 through 8.3 reflect the variety and diversity of Idaho's Nonpoint Source Program. Idaho endeavors to seek and fund a balance of projects that protect the beneficial uses of both surface and ground water, and target critical areas and sources contributing to NPS pollution.

Project Evaluation and Administratio

As with any review process, a set of evaluation criteria are necessary to evaluate the project proposals. These criteria are subject to a yearly review and are updated as the priorities within the State Nonpoint Source Management Program change. The criteria are provided to each agency or group seeking funding during the initial request for projects phase. This enables each applicant to understand programmatic and state priorities. Additionally, project applicants should communicate with all pertinent natural resource agencies, organizations, and industries when developing a nonpoint source project. This provides natural resource agencies the opportunity for review and comment on projects prior to IDEQ's evaluation. This up-front work with the other agencies should also help identify those areas for which, joint

efforts could enhance the benefits to the resource base. It should identify the various roles and requirements of each agency, ensure all current and ongoing NPS prevention and control efforts are recognized in the plan, represents a comprehensive working plan, and incorporates the various commitments for technical assistance or funding from the partnering agencies. Participants are encouraged to submit draft proposals to IDEQ for a preliminary project review. Any deficiencies with the project submittal are communicated back to participants so that changes can be made prior to the application due date. These preliminary reviews have provided applicants with additional technical assistance to meet Nonpoint Source Program goals.

The final evaluation phase has several steps. First, a technical project evaluation is completed at IDEQ's regional offices. During this phase the projects are reviewed to ensure that all state and federal programmatic criteria have been met (see Annual and Multi Year Work Plans, Chapter 3). Next, each project is reviewed to ensure that it demonstrates availability of resources to maintain the project for a minimum of 10 years following the close of the contract and will yield lasting water quality improvement in the project areas. Those projects which pass the technical evaluation are routed to the appropriate BAG for review and ranking. The proposals are reviewed by the BAGs to determine how the fit into the overall water quality management of the basin. Once all the projects have been reviewed and ranked by the BAGs, they are submitted to the IDEQ central office where a review panel composed of BAG chairmen and appropriate IDEQ staff prioritize all Idaho projects.

Project Exemptions

The CWA and other federal programs emphasize remediation and reduction of generated waste. One purpose of Idaho Nonpoint Source program is to effectively administer the CWA §319 grant program. As such, IDEQ is reluctant to become involved with those projects which could generate a regulated waste or involve IDEQ in future clean-up activities which may be mandated as part of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Therefore, projects will not be eligible for funding which generate a waste by-product that is designated and/or regulated b Resource Conservation and Recovery Act (RCRA) or Toxic Substances Control Act (TSCA), which cannot be disposed o in a nonhazardous manner (i.e., RCRA subtitle "D" landfill), or which would implicate the State of Idaho in future CERCLA related clean-up activities. Additionally, projects will not be eligible for funding under this plan that would include an activity associated with the removal, transport, or disposal of materials which cannot be permanently and safely entombed in a RCRA subtitle "D" landfill or which fails the Toxicity Characteristic Leaching Procedures (TCLP) testing procedures. The exception to these provisions are for those projects dealing with nonpoint source materials exempted through the Bevill amendments (e.g., mine tailings).

Project Subgrants

Individual project subgrants are issued to each successful applicant. The subgrant includes a copy of the applicants work plan and schedule along with an estimated completion date of the project. Individual subgrants developed through IDEQ are subject to all federal and state grant reporting requirements. Should IDEQ determine that a subgrantee is not providing the services or products outlined in the subgrant, IDEQ may terminate the subgrant.

The focus of the NPS program is to implement on-the-ground BMPs that reduce nonpoint source pollution and therefore, IDEQ encourages participants to keep capital and operating costs for equipment purchases low. IDEQ encourages participants to use match monies to purchase needed equipment. Project administrative costs are limited to 10 percent o the total project costs. Administrative costs include combined salaries, overhead, and indirect costs.

Additionally, IDEQ reviews all project invoices to ensure that charges submitted to IDEQ for payment are appropriate and compatible with the established subgrant work plan. Any questions related to submitted invoices are returned to the subgrantee for resolution prior to payment being issued. Subgrant revisions and extensions are allowed under the NPS program, but must be submitted in writing and approved by IDEQ prior to any revisions being enacted

Project Reviews and Reporting

Projects are subject to a programmatic task and financial review once 90 percent of the tasks have been completed. IDEQ attempts to visit and review 50% of the projects yearly to ensure that work is being completed according to the prepared contract. Project participants are required to submit progress reports to IDEQ as specified by contract. A final report on the project is due to IDEQ ninety (90) days from completion of the last scheduled task. Once the final report has been completed, the project is closed out and EPA is notified.

Project Monitoring

IDEQ is the designated state agency for the collection of instream water quality monitoring data. It is incumbent on the designated agency to conduct the proper testing and field studies to document BMP effectiveness prior to project implementation (see Agency Roles IDEQ, SCC, ISDA, Chapter 2). Therefore, the State NPS program shall not use §319 grant funds for "end of field" effectiveness monitoring for BMPs identified in the State Water Quality Standards or as adopted by the appropriate designated State agency. However, this does not preclude project participants from submitting projects with proper ground water or surface water monitoring plans, including "end of field" monitoring for experimental BMPs. The monitoring and QA/QC plans for projects are subject to review and approval by IDEQ sixty (60) days prior to the commencement of field operations.

IDEQ encourages project participants to use monitoring methods which are simple in nature and can easily demonstrate the project effectiveness. For example, many participants have chosen to use photographic monitoring to demonstrate improvements to riparian habitat and vegetation or measuring the number of yards of sediment removed from gully plugs or sediment basins during scheduled maintenance. These types of monitoring activities have proven to be an effective and a cost-efficient method of determining BMP effectiveness when compared to the development and implementation of a more rigorous chemical specific monitoring program (see Feedback Loop, Chapter 6).

However, IDEQ does recognize that in some instances (e.g., ground water projects) this type of monitoring activity would be insufficient to demonstrate certain types of BMP effectiveness. Under this type of circumstance, IDEQ does allow for chemical specific monitoring. However, the goals and objectives of chemical specific monitoring plans must be worked out with IDEQ staff during the development of the project to ensure that the data collected will provide for the best analytical results and a true indication of the BMPs effectiveness.

CHAPTER 9 - PROGRAM REVISIONS OR UPDATES

Key element #9 states that "*the State periodically reviews and evaluates its nonpoint source management program using environmental and functional measures of success, and revises its nonpoint source assessment and it's management program at least every five years.*"

As part of its strategic planning process the IDEQ is responsible for implementing environmental protection laws and programs within the state of Idaho. In 1995, IDEQ completed its first strategic plan, which provided a framework to build a system for continual assessment and improvement of programs and services. As part of this assessment process, each state agency is required to prepare an annual performance plan covering each budgeted program, function, and activity. This plan establishes outcome-based performance goals and objectives, and sets performance standards to define and measure the levels of accomplishment or results that are achieved by the program, function, or activity. The plan defines both performance measures and environmental indicators. Performance measures define the level of progress of a program, whereas environmental indicators reflect program results and outcomes.

IDEQ prepares a comprehensive inventory of environmental indicators for assessing the current level of scientific knowledge of Idaho's environment. The goal is to determine what additional information, data, and trends are necessary to adequately monitor the environment. Incorporated in this process is the "feedback loop" to appropriately address and modify existing monitoring and implementation methods. With complete information, environmental problems are identified and prioritized, and environmental results are documented. In many instances, ongoing federally mandated programs (i.e., CWA §303(d), §305(b)) require IDEQ to utilize performance standards, measurements, goals, and objectives. These program descriptions serve well to satisfy the requirements of the Idaho Code and the guidance established by EPA.

IDEQ will continue to facilitate periodic nonpoint source program audits similar in nature to the audit done in 1995. B performing these periodic audits, IDEQ can ensure that each of the nine key elements are being adequately addressed and institute changes as required to ensure that the beneficial uses of Idaho's waters are being maintained and/or restored. The writing of this document has helped IDEQ focus on its priorities and processes. It has helped to further define and evaluate the major changes the State has undertaken since the TMDL lawsuit and ensuing passage of Water Quality Law §39-3601 et seq. The revision of this document will be of significant help to the State as it undergoes the review and revision of its man MOUs during FY2000. This MOU revision will require a full audit of the State processes and linkages between its man state and federal partners to build the structure needed to ensure the completion of its aggressive TMDL schedule, and that TMDL/WRAS implementation ensures the State meets water quality standards for all waterbodies.

The strategy developed throughout this document will be reviewed and evaluated a minimum of once every five years. However, the delisting of water quality limited water bodies and the restoration or the preservation of existing surface water designated beneficial uses, or ground water beneficial uses will serve as the primary indicators of success for the nonpoint source program.

CHAPTER 10 - RECOMMENDATIONS AND CONCLUSIONS

The State of Idaho recognizes that nonpoint source water pollution has been and continues to be a serious impediment to meeting the goals of the Clean Water Act. In keeping with the goals of the CWA, the IDEQ and its natural resource agenc partners developed this revision to the Idaho Nonpoint Source Management Program Plan. Idaho will ambitiously pursue implementation of this program over the next five years dedicating personnel and monetary resources to the advancement o nonpoint source water pollution control activities. This plan, when implemented provides:

- a systematic way to assess nonpoint source problems statewide;
- a clear prioritization process that helps provide solutions to areas of concern;
- for coordination and collaboration among state, federal, and local entities committed to water quality protection and restoration;
- for change from the historical focus at the landscape level into the watershed or drainage basin level;
- for long term maintenance and upkeep of nonpoint source controls after project monies cease; and
- for lasting statewide water quality improvements through the enhancement of beneficial uses and meeting of water quality standards.

Recommendations

In order to effectively achieve our NPS goals, IDEQ will have to create and foster new partnerships. These partnerships will provide opportunities for input from the various agencies and interest groups and serve as a vehicle for ensuring that project plans are compatible with the physical environment, reflect social values, and meet the desirable technical goals o sound watershed management.

Additional recommendations by the NPS Revision Committee to improve Idaho's program include:

- Focus §319 grant resources on measures outlined in approved TMDLs and TMDL implementation plans;
- Revise the nonpoint source interagency Memorandum of Understanding, as necessary to incorporate ground water;
- An enhanced focus for all agency resources on the implementation of nonpoint source best management practices to protect and/or restore beneficial uses of both surface and ground waters of the State;
- Develop criteria and a schedule for implementing the federal consistency reviews within the state of Idaho;
- Limit the individual costs of administrative functions related to salaries, indirect, and fringe on all subgrant activities to 10% of the project cost; and
- Convene the nonpoint source revision committee as needed to review and update the Nonpoint Source Management Program Plan to meet the state's changing environmental needs.

IDEQ has already incorporated many of these elements by: 1) tying future grants to meeting TMDL/WRAS implementation needs, 2) challenging designated agencies to ensure proper application of BMPs, monitoring to evaluate effectiveness, and ensuring all entities receiving load allocations from a given TMDL are addressed in watershed implementation plans, 3) commit to updating umbrella MOU and associated appendices to include greater consistency of issues, and to better outline the various roles and methods used for the achievement of the State water quality goals in FY2000, 4) challenging designated agencies and state/federal partners to focus tools to identify priorities and needs through the TMDL process to ensure effectiveness of efforts statewide, 5) follow-up achievements by program reviews and updating of goals, objectives, and indicators of success as necessary.

Inherent in the incorporation and completion of the above elements by IDEQ are the additional objectives and performance measures achieved toward meeting the nine key elements.

Conclusions

Focusing nonpoint source pollution control measures at a watershed level in priority areas is an effective method of targeting the most critical problems while reducing duplication and inconsistency among regulatory entities, and increasing harmon

and cooperation between user groups. It allows public involvement to be focused on defined areas, where results can be measured, and fosters cooperative problem solving where players can assist each other to reach mutually beneficial results.

IDEQ recognizes that to be successful in the nonpoint source program, the process must be inclusive and must be driven b local wisdom and experience. The role of IDEQ in solving nonpoint source problems is typified by providing support to local sponsors and partners to guide decision-making on local issues. This support is provided through sound fiscal management of the §319 grants, scientific-based technical assistance, and integration of related aspects of water management, such as surface and groundwater, water quantity and quality, economic development and environmental protection. IDEQ ensures these elements for planning and implementation are received and incorporated at the local level b providing continuous information, education, and technical support through the designated agencies and their partner agencies, and by insuring BAG/WAG involvement throughout its NPS process.

Throughout the statewide, regional and local monitoring process tied to UAW watershed priorities, the implementation phase of TMDL/WRAS will have been targeted, with pollutants identified and pollutant sources known. An initial scoping process (such as the NRCS Preliminary Investigation Process, see Ag TMDL Action Plan, Appendix E) will tie implementation activities to the BMPs needed to achieve water quality standards. These will be included into implementation plans which include all entities receiving a load allocation from the TMDL. It will show the BMPs needed, where needed, who will participate, and identify the programs and funds needed to implement the plan. Site specific and BMP effectiveness monitoring will be performed by the SCC, IASCD, ISDA and others, in conjunction with ongoing monitoring by IDEQ to ensure beneficial uses and water quality standards are met.

Implementation of this plan moves IDEQ closer to meeting Idaho's objectives by providing a forum for greater public involvement in state nonpoint source decisions; promoting the formation of local partnerships to set priorities and be more responsive to public needs; maximizing the efficient and effective allocation and use of resources; coordinating planning and implementation activities with other agencies and government entities; and fostering an open and continuous evaluation process.

The Paradise Creek Implementation Plan attached (Appendix G) is an example of the projects for which the NPS Management Program has been striving to achieve. It should represent a good use of §319 funds by the State, as well as representing how the State has enhanced its program toward meeting the Nine Key Elements necessary for an approvable NPS Management Plan for Idaho.

REFERENCES CITED

Brown and Caldwell, 1997, *Handbook of Valley County Stormwater Best Management Practices*.

Ground Water Quality Council, 1996, *Idaho Ground Water Quality Plan*.

Idaho Agricultural Statistics Service, 1998, *Idaho Agricultural Statistics*.

Idaho Association of Soil Conservation Districts, 1995, *Idaho Home*A*Syst Project: Idaho Homestead Assessment System*.

Idaho Division of Environmental Quality, 1999a, *Guidance for Development of Total Maximum Daily Loads*.

Idaho Division of Environmental Quality, 1999b, *(Final Draft) Overview for the Implementation of Nonpoint Source TMDLs*.

Idaho Division of Environmental Quality, 1999c, *(Final Draft) Idaho Source Water Assessment Plan.*

Idaho Division of Environmental Quality, 1998a, *Beneficial Use Reconnaissance Project-1998, Lake and Reservoir Workplan*.

Idaho Division of Environmental Quality, 1998b, *Beneficial Use Reconnaissance Project-1998, Wadable Streams Workplan*.

Idaho Division of Environmental Quality, 1998c, *Beneficial Use Reconnaissance Project-1998, Rivers Workplan*.

Idaho Division of Environmental Quality, 1998d, *The Idaho Recycling Guide*.

Idaho Division of Environmental Quality, 1998e, *Strategic Direction 1999-2002.*

Idaho Division of Environmental Quality, 1998f, *1998 Idaho Water Quality Status Report* (Clean Water Act §305(b)).

Idaho Division of Environmental Quality, 1998g, (Draft) Continuing Planning Process.

Idaho Department of Health and Welfare, 1997a, *Technical Guidance Manual For Individual and Subsurface Sewage Disposal*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, 1997b, *Water Body Assessment Guidance - A Stream to Standards Process*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, 1997c, *1996 Water Quality Status Report*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, 1997d, *Forest Practices Water Quality Act for 1996*, Idaho Department of Health and Welfare, Division of Environmental Quality, prepared by 1996 Forest Practice Audit Team.

Idaho Division of Environmental Quality, 1997a, *Catalog of Stormwater Best Management Practices for Idaho Cities and Counties*.

Idaho Division of Environmental Quality, 1997b, *Environmental Planning Tool and Techniques: Linking Local Land Use to Water Quality Through Community-Based Decision Making*.

Idaho Department of Health and Welfare, 1996, *Pollution Prevention for Vehicle Maintenance*, Idaho Department o Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, 1995, *A Business Guide to Pollution Prevention*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, 1992, *Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program In The State of Idaho*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, Division of Environmental Quality and Soil Conservation Commission, 1991, *Idaho Agricultural Pollution Abatement Plan*.

Idaho Department of Health and Welfare, 1990, *Coordinated Nonpoint Source Water Quality Monitoring Program For Idaho*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Department of Health and Welfare, 1988, *State of Idaho Forest Practices Water Quality Management Plan*, Idaho Department of Health and Welfare, Division of Environmental Quality.

Idaho Transportation Department, 1994, *Catalog of Storm Water Best Management Practices (BMPs) for Highway Construction and Maintenance*.

Idaho Wheat Commission, 1998, *Positive AG Stewardship of Idaho's Land*.

Panhandle Health District, 1996, *Estimating and Mitigating Phosphorus From Residential and Commercial Areas in Northern Idaho*.

State of Idaho, Idaho State Legislature, 1989, *The Ground Water Protection Act of 1989, Idaho Code Section 39-102--39-127 and Chapter 65, Title 67, Section 67-6537*.

State of Idaho, Idaho State Legislature, 1997, *Water Quality Law, Idaho Code Section 39-3601 et. seq.*

State of Idaho, Idaho Water Resource Board, 1992, *Idaho State Water Plan*.

State of Idaho, 1996, *Governor Philip E. Batt's State of Idaho Bull Trout Conservation Plan*.

United States, 1972, *Federal Water Pollution Control Act, 33 U.S.C.A.* §§1323 (Federal Clean Water Act §313).

U. S. Department of Agriculture - Natural Resources Conservation Service, 1994, *1992 National Resources Inventory*.

U. S. Environmental Protection Agency and U. S. Department of Agriculture, 1998, *Clean Water Action Plan: Restoring and Protecting America's Waters*.

U. S. Environmental Protection Agency, 1997 Robert Perciasepe Memorandum, *New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs).*

U. S. Environmental Protection Agency, Office of Water, 1996, *Nonpoint Source Program and Grants Guidance For Fiscal Year 1997 and Future Years*.

U. S. Forest Service and Bureau of Land Management, 1999, *Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters* (version 2.0), Boise, Idaho.

U.S. Geological Survey, 1994,

U.S. Geological Survey, 1995,